PowerTALK™ News

Published Monthly by Power Systems Research
Data · Forecasting · Solutions™

December 22, 2020 Volume 5 No. 12

Worldwide News & Analysis

In This Issue

About Us

Power Systems Research (PSR) is a world leader in providing power equipment information, whether it's pure data, analysis, forecasting or specific business intelligence. This product information ranges from IC engines to battery-electric and hybrid powertrain technologies. PSR has been providing world class business and market intelligence to industry leaders for more than 40 years. How can we help you? For details, call **+1 651.905.8400** or email **info@powersys.com**. **www.powersys.com**

Power Systems Research: Data...Forecasting...Solutions

PowerTALK™ News Available in Japanese

To better meet the needs of our readers who prefer to read PowerTALK™ News in Chinese or Japanese, we now offer articles from Asia in Chinese and Japanese, as well as English. Click here to read directly in **Japanese**.

PowerTALKを日本語でお読みいただけるようになりました

日本語で読みたいという読者様のニーズに応えるために、アジアから日本語の記事を提供しています。日本語をご希望の方は**こちら**をクリックしてください。

Questions, Comments? Contact Joe Delmont, Editor
jdelmont@powersys.com | +1 651.905.8422 | www.powersys.com

Click Here To Go To Page 1

Power Systems Research Webinar Series

Power Systems Research and HDMA Plan April Webinar

On Wednesday, April 21, 2021, representatives of Power Systems Research and the Heavy Duty Manufacturers Association will present a one-hour webinar discussing important industry trends and forecasts. Details regarding content and registration will be available closer to the event.

The webinar is another in a series of webinars presented by Power Systems Research with industry partners. Most recently, PSR joined with JCB Power Systems to present a free one-hour webinar discussing production forecasts and emissions details for the Construction Industry in Europe and North and South America. **Presentation materials available**.

Interested in presenting a webinar with Power Systems Research? **Details here**. **PSR**

North America Report

Joe Zirnhelt

PowerTracker™ Report: Gen-Set Sales Rebound in Q3 2020

By Joe Zirnhelt, President and CEO

Read Complete Report Here

SUMMARY: Our PowerTracker™ dealer and distributor survey of 200 respondents reported that gen-set sales recovered some momentum in Q3 2020 up 11.9% from Q2 2020 levels. This increase follows a slow start to the year in Q1 2020 where overall dealer reported sales were down 9.8% from Q4 2019 levels and Q2 2020 where we observed a quarterly increase of 4.5% over the low Q1 2020 levels.

The only part of the market that seemingly did not recover in Q3 2020 was the diesel <20 kW with -8.3% for <10 kW and -3.6% for 10-20 kW. The remainder of diesel (>20 kW) had single digit quarterly increases across the power ranges. The gaseous fueled gen-sets had the most significant rebound this quarter with all power ranges up to 500 kW with a greater than 10% quarterly change – helping to offset the weak first half of 2020 as concerns and shutdowns ensued over COVID-19. **PSR**

Like what you see? To ensure that you continue to receive your complimentary copy of the PowerTALK™ News report each month, Sign up now.

Click Here To Go To Page 1

North America Report

Continued from page 2

Widening the Panama Canal has been a factor since more imported goods can be delivered closer to their end destinations.

Chris Fisher

2020, A Year To Forget; 2021 Looking Better for MHV Segment

By Chris Fisher, Senior Commercial Vehicle Analyst

Read Complete Report Here

SUMMARY: In this article we provide an overview of the medium and heavy commercial vehicle market (GVWR > 6 MT's) along with current trends and OEM happenings in North America.

NORTH AMERICA. MHCV production in North America is expected to decline by 35% in 2020 compared to 2019. However, orders for class 8 trucks improved significantly in Q4 2020 as large fleets placed their orders for a 2021 build. This appears to signal an improvement in demand for 2021 as the market aligns itself with the expected freight level moving forward. The consumer segment was strong during the last half of the year and the industrial segment is now expected to improve, as well.

Within the consumer side, reefer, flat bed and dry van carriers have performed relatively well. We have also seen contract and spot rates improve primarily due to tightening truck capacity and an on-going driver shortage.

Throughout 2020, freight was also very uneven. For example, the trucking sectors that haul for the industrial and energy industries did not see the surge in freight like the consumer side of the economy. Early in 2020 it looked like class 8 truck production could decline to as low as 135k trucks compared with a current production forecast of approximately 200k trucks.

During the past few years there have been some significant trends taking place in the medium and heavy truck segment in North America. In order to retain drivers, fleets have been transitioning their focus on more regional haul rather than long haul. Basically, truck drivers do not want to "live on the road." E-commerce has helped facilitate this trend by distributing inventory to a wider range of locations.

Widening the Panama Canal has been a factor since more imported goods can be delivered closer to their end destinations. During the past decade, the commercial vehicle market has come under pressure to adopt alternative fuels such as natural gas, hybrids, electric and more recently hydrogen fuel cell technology. Hybrid vehicles have not gained traction and natural gas is currently relegated to specific applications.

Currently, electric trucks are still in the test phase while hydrogen fuel cell trucks are just beginning the test phase. Much like the rest of the world, major OEMs have electric and hydrogen trucks in the testing stage with series production expected to commence in the 2023-2024 time-frame. However, numerous barriers still will need to be overcome before adoption can take place on a large scale.

Click Here To Go To Page 1

North America Report

Continued from page 3

For several years, we've been seeing companies shifting production to China as they seek lower production costs, but now this trend has started to reverse as companies seek to decentralize production. The United States Tariffs on Chinese products, new global trade deals and the introduction of the Coronavirus shed significant light on the risks to the supply chain.

We should note there is significant investment into technology which could move China into a different spot in the supply chain. South Asian nations and Mexico will primarily benefit from this transition.

While the trend toward electrification has been slower for medium and heavy trucks, the transit bus segment is on a somewhat faster track to series production. Since transit buses typically have pre-defined routs and good access to a recharging infrastructure, they are good candidates for electrification. It also helps that this segment is not-for- profit and a payback is not typically required. The significant barriers to adoption appear to have been overcome. During the past few years, numerous large municipalities have set target dates to have their entire bus fleet converted to all electric vehicles.

In California, CARB has established a mandate requiring all transit buses to be zero-emission compliant by 2040. The Los Angeles Department of Transportation plans to have an all-electric bus fleet by 2028. They recently ordered 155 electric buses from BYD and Proterra to be delivered during the next two years.

San Francisco plans to have a zero-emission bus fleet by 2035 and plans to purchase only zero-emission buses starting in 2025. In Seattle, King County Metro plans to transition to 100% zero-emission buses no later than 2040.

New York currently has over 5,000 buses which is the largest transit fleet in the country, and the city plans to convert the entire fleet to all electric by 2040. The Chicago city council also approved the transition to a 100% zero-emission bus fleet by 2040.

Besides the trend toward vehicle electrification, there are some other significant OEM recent developments in North America.

In November 2020, Volkswagen's TRATON group and Navistar announced a merger agreement in which TRATON will acquire all outstanding shares of Navistar. Previously, TRATON held 16.7% of Navistar's common shares. The deal is valued at $3.7 billion and is expected to be finalized in mid-2021. Navistar has been in collaboration with TRATON's brand MAN for numerous years primarily in engine development. PSR believes additional engine offerings will be one of the primary goals to improve profitability and long-term market share improvement within the class 8 truck segment.

To reduce costs, Ford recently ended production of the heavy Cargo series truck in Brazil. Ford has always struggled with profitability in this region and decided to focus their efforts elsewhere.

Click Here To Go To Page 1

North America Report

Continued from page 5

Mack has a strong presence in the heavy vocational market and has recently introduced their MD medium truck lineup which is produced at a new facility in Virginia. Their new medium truck line-up covers class 6 and 7 and Mack should be a strong competitor in this segment. **PSR**

Powersports Segment Growth Ignores COVID-19

By Michael Aistrup, Senior Analyst

Michael Aistrup

While much of the North American economy slowed to a crawl after COVID-19 shutdowns in 2020, the powersports industry posted significant growth. Many people, weary of staying at home, found a cure for cabin fever while riding an off-road vehicle or experiencing socially distant spaces on trails. By all indications, the sales increase in powersports equipment has been one of the few bright spots in an otherwise grim COVID-19 economy.

Powersports Market

According to Jeremy Jansen, senior vice president of Wells Fargo Commercial Banking's distribution financing business, "What started out as a slight uptick has just taken off to record sales levels," he said. "Dirt bikes, ATVs, side by sides, personal transport vehicles — everything in the book is retailing well above prior year." After plummeting briefly in mid-March amid the initial shutdown, powersports sales skyrocketed in the ensuing months.

The unexpected surge in demand created challenges for Polaris Industries, Minneapolis, a leader in several of the powersports segments, as it worked to evaluate, finance, and stock inventories at dealerships across the U.S. and other countries. "During the pandemic, there's been a strong trend of people spending their money on powersports vehicles, instead of airline tickets and cruises," said Mike Speetzen, chief financial officer of Polaris. "It's all about families looking for a safe way to do things together outside, and our vehicles allow them to do that."

Retail sales in some segments could have been stronger if the inventory had been available. Some manufacturers have missed selling units while factories were shut down.

According to a chart furnished by Motorcycle Power News, one gauge of the strength of the industry is an increase of prices, especially significant as some segments are getting to the end of their season. Prices normally taper off significantly this time of the year. Unexpectedly, nearly every segment is increasing in value in unison, which almost never happens.

Like what you see?

To ensure that you continue to receive your complimentary copy of the PowerTALK™ News report each month, Sign up now.

Click Here To Go To Page 1

North America Report

Continued from page 5

Ever since the 2008 Recession, powersports has struggled to get back to 2008 sales levels. COVID-19 may have given the industry new customers it has been seeking since 2008.

Segment	June	July	Aug	Sep
ATVs	+4.6%	+1.5%	+9.0%	+3.0%
Cruisers	+3.0%	+1.0%	+2.7%	+3.9%
Domestic V-Twins	+3.3%	+1.5%	+3.5%	+2.5%
Metric Cruisers	+2.8%	+0.5%	+2.0%	+5.0%
Jet Boats	+2.0%	+0.3%	+3.0%	+3.0%
Off-Road Bikes	+1.6%	+0.3%	+7.5%	+4.0%
Dual Sports	+2.8%	-1.5%	+1.0%	+4.0%
Scooter	+2.1%	-0.8%	+1.0%	+1.0%
Snowmobile	-2.0%	-3.0%	+0.5%	+1.5%
Street Bikes	+2.1%	No Change	+3.0%	+4.5%
Utility Vehicles	+10.5%	-1.0%	+7.0%	+0.5%
Watercraft	+2.0%	+0.3%	+3.0%	+3.0%

Source: Powersports Industry Growth News

Some highlights:

- Retail sales from CDK Lightspeed shows same store unit sales up nearly 24% for July 2020 versus July 2019.
- The Motorcycle Industry Council reports that new off-road motorcycle sales were up over 50% for the first half of 2020 versus 2019. Scooter sales rose 6.4% for the same period.
- BMO Capital's Bombardier financial results report: off-road vehicle sales up over 60% in the second quarter, personal watercraft sales up over 20%.
- According to Auto Finance News, BMO Capital Markets reports that boat sales increased 25% year over year for the most recent reporting period.
- Bombardier reported their powersports sales increased by 40% for the May-July period in North America.

Ever since the 2008 Recession, powersports has struggled to get back to 2008 sales levels. COVID-19 may have given the industry new customers it has been seeking since 2008. Hopefully, the sales increase is not a one-time surge related to people needing to get out of the house and needing social distancing. My general feeling is the new customers are here to stay. **PSR**

DATAPOINT: *US Trenchers*

5,768

By Carol Turner, Senior Analyst, Global Operations

The 5,768 units is the estimate by Power Systems Research of the number of Trenchers to be produced in the U.S. in 2020.

This information comes from industry interviews and from two proprietary databases maintained by Power Systems Research: **EnginLink™** , which provides

Click Here To Go To Page 1

Data Point

Continued from page 6

information on engines, and **OE Link™**, a database of equipment manufacturers.

Market Share: With combined plant totals of 49.5% Charles Machine Works leads in production of trenchers in the United States. In second position is Vermeer with 13%; third, is Ground Hog with 11%.

Exports: Collectively, up to 30% worldwide, with buyers in South Africa and Russia making up the two largest segments.

Trends: In 2019, production of Trenchers in the United States increased nearly 3%. Production is expected to remain flat in 2020 with a slight decrease of 2%. Trenchers, typically wheeled or chain, are utilized in a variety of applications and these machines are quite diversified for various markets having a wide range of clients. Rental companies are hanging on to their trenchers longer, due to increased replacement costs. Also affecting production is the impact of Tier 4 engines that significantly increase trencher unit costs.

One more driver: trenchers go head to head with compact excavators. Many users prefer excavators because they are considered a more versatile machine. As market factors fluctuate, expect trencher production to gain up to 5% by 2025. **PSR**

EUROPE REPORT

Emiliano Marzoli

Reaching New Heights

By Emiliano Marzoli, Manager – European Operations

Magni TH, an Italian manufacturer of material handling equipment, has signed an agreement with Bobcat to supply a range of rotating telehandlers (RTH) between 18 and 39 meters. The new machines will be produced in Italy, by Magni TH, with the Bobcat branding and stage V engines. In order to achieve demand Magni has already developed a new facility, allowing the company to produce 3500 rotating telehandlers per year, once at full capacity. This agreement will allow Magni to grow significantly according to their president and founder, Riccardo Magni.

The agreement covers several regions: Europe, Russia, Middle East, Africa and South America.

Source: *Forklift Action* **Read The Article**

PSR Analysis: This agreement will boost Magni production figures, and Bobcat Sales. According to our database **OE Link™**, Bobcat is one of the most recognised manufacturer of rigid telescopic boom forklifts, 3rd by volumes in Europe. With the addition of this new line of products, Bobcat cat could be able to leverage its brand to penetrate a new market.

Click Here To Go To Page 1

Europe Report

Continued from page 7

VW Truck and Bus has announced a new cycle of investment in Brazil operations of US$ 400 Million, for the period 2021 to 2025.

At the same time Magni can reinforce their position as one of the leaders in Rotating Telehandlers (RTH). Currently, the Italian OEM is producing some 500 units of RTH per year. While initially we do not expect a strong pick up in volume, due, in part to the current unfavourable macro-economic conditions, we expect to see in the coming three years figures above 1000, positioning the company in closer competition to the market leaders Manitou and Merlo. **PSR**

Brazil/South America Report

By Fabio Ferraresi, Director Business Development South America

Fabio Ferraresi

VW Truck & Bus To Invest US$ 400 Million in 2021-2025

VW Truck and Bus has announced a new cycle of investment in Brazil operations of US$ 400 Million, for the period 2021 to 2025. This is higher than the last investment cycle, that was US$ 300 million that ended in 2020. This investment will be allocated in new products, mainly in alternative propulsion systems, such as electric, and improvements in the production facilities.

Source: *AutoData* **Read The Article**

PSR Analysis: The investment reinforces VW's Truck and Bus focus in the Brazilian market. Product development for Proconve P8 in January 2023 will use a significant part of the investment; investments also will be made in facilities adjustments for higher volumes of production in the coming years.

Ford Announces US$ 580 Million Investment in Argentina

This investment is dedicated to the new generation of Ford Ranger, produced in Pacheco at the Great Buenos Aires since 1998. 70% of the investment will be for production facilities and 30% in the new product line development.

Source: *Valor Economico* **Read The Article**

PSR Analysis: The production in Argentina is mainly for export. The main market for Ranger pickups is Brazil where they will compete with the GM S10 produced in Brazil and the Toyota Hi Lux produced in Argentina

Brazil Is Key To Emissions Strategies for Oil Companies

Recently, European BP, Shell, Equinor and Total signed the agreement to meet the zero net emissions target by 2050. These companies see the Brazilian market as a key component in meeting this goal while they assemble the projects portfolio with Photovoltaic, Offshore Eolic and biofuel.

Source: *AB Solar* **Read The Article**

Click Here To Go To Page 1

Brazil/South America Report

Continued from page 8

PSR Analysis: Brazil has a clean matrix and tradition in biofuel tradition since it began using Ethanol in the 70's and 80's. Some companies, such as Shell, operate with biofuel in Brazil, producing and distributing Ethanol, and plan to expand this position to meet future emissions targets. **PSR**

Far East: Japan Report

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

Akihiro Komuro

Japan Sees Hydrogen as Main Fuel by 2030

The government of Japan has set a target of 10 million tons of hydrogen to be used in Japan by 2030, enough to operate more than 30 nuclear power plants. This would be more than 10% of the total electricity capacity in Japan. It will also hasten the practical application of hydrogen power generation and accelerate the spread of FCVs. The government will provide support through a newly established 2 trillion Yen fund and tax incentives for capital investment.

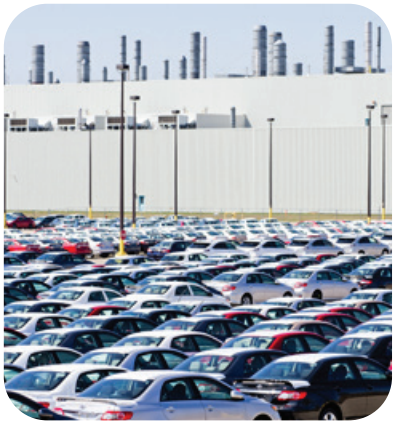
The private sector has also started to take action. 88 companies, including Toyota and Iwatani Corporation, announced in December the launch of the "Japan Hydrogen Association (JH2A)" to promote the development of hydrogen infrastructure.

Company	Program/Goal
Toyota Motor Corporation	New FCV Mirai with extended cruising range to be launched in December 2020
Iwatani Corporation	Expand demand for hydrogen in shipping, railways, and power generation to reduce costs
MITSUI & CO., LTD.	Participate in a demonstration experiment to transport hydrogen procured in Brunei to Japan
KEPCO (Kansai Electric Power Co., Inc.)	Investigating the feasibility of introducing hydrogen contamination in thermal power generation
TOSHIBA CORPORATION	Participating in a demonstration test of one of the world's largest hydrogen production bases in Fukushima
ENEOS Corporation	Currently operating 44 hydrogen stations nationwide. Plans to expand in the future.
Kawasaki Heavy Industries, Ltd.	The goal is to commercialize a large hydrogen carrier by 2030
Mitsubishi Heavy Industries, Ltd.	Promote the development of thermal power generation facilities that use hydrogen as fuel to reduce carbon dioxide emissions.
Kobe Steel, Ltd.	The company is involved in compressors and other equipment necessary for transporting and storing liquefied hydrogen.

Click Here To Go To Page 1

Far East Report

Continued from page 9



Toyota, which launched the mass-produced FCV Mirai, has played a leading role in the private sector's use of hydrogen. Mirai has sold only 10,000 units worldwide through September. FCV sales in Japan in fiscal 2019 were about 700 units, including Toyota. This is small compared to the approximately 20,000 units of EVs.

As a way to break the ice, the company plans to launch the new Mirai in December, which has a range about 30% longer than the current range of about 650 kilometers when fully charged with hydrogen.

JH2A will promote the use of hydrogen in areas other than automobiles. In the iron and steel industry, the reduction of iron ore will be switched from coal to hydrogen. Major blast furnace companies such as Nippon Steel Corporation are aiming to commercialize technology to reduce CO2 emissions by using hydrogen by 2050.

JERA, a fifty-fifty joint venture between Tokyo Electric Power Company and Chubu Electric Power Company, will also switch its power generation fuel to hydrogen and reduce its CO2 emissions to practically zero by 2050.

On the other hand, in order to realize power generation and steel manufacturing using hydrogen, it is necessary to procure large amounts of hydrogen energy at low prices. Kawasaki Heavy Industries, Iwatani Corporation, Marubeni Corporation, and others began a demonstration project in 2018 to produce and liquefy hydrogen from low-grade coal called "lignite" in Australia and transport it by ship to Japan for use in power generation and other applications.

The plan is to conduct the first hydrogen production and transportation tests by 2021. Iwatani Corporation, Kansai Electric Power Company, and others are also considering the practical use of hydrogen-powered ships by 2025. They will be equipped with fuel cells and run on electricity generated by a reaction between hydrogen and oxygen in the air.

Source: *The Nikkei*

PSR Analysis: Japan is seriously considering making hydrogen the energy of the next generation. The fact that the target year has been set in concrete terms will further accelerate this effort. On the other hand, there are additional costs and many safety and environmental concerns.

On the safety side, there is a perception that hydrogen is extremely dangerous and frightening because it is prone to explode. Hydrogen advocates argue against this view, saying: “It is true that hydrogen explodes easily and is highly flammable. However, it is difficult to ignite because it diffuses quickly and even if it leaks, it will quickly dilute. It is unlikely to ignite or explode inside the cylinder, as it would only burn near the gas outlet like a burner.

Hydrogen is not completely safe, but legislation is being put in place to ensure safety. Taking hydrogen stations as an example, various laws have been established to regulate everything from the location of the stations to the materials used in the storage facilities to the method of filling the stations with hydrogen.

“Because of these safety measures, the cost of constructing and operating

Click Here To Go To Page 1

Far East Report

Continued from page 10

As for fuel cells for home use, deregulation is already underway. We are now in a phase where we need to educate the general public so that they can understand the safety of hydrogen correctly.

hydrogen stations has ballooned, and installation has not progressed as much as the government had expected. The Ministry of Economy, Trade and Industry (METI), together with the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and the Fire and Disaster Management Agency (FEMA), is continuously reviewing regulations for hydrogen stations.

As for fuel cells for home use, deregulation is already underway. We are now in a phase where we need to educate the general public so that they can understand the safety of hydrogen correctly.''

Another claim of the opponents is that hydrogen is not really clean. In my opinion, this is basically correct. Currently, hydrogen in general circulation is made from crude oil and natural gas, and CO2 is emitted when hydrogen is made from the raw materials. The method of making hydrogen from hydrocarbons contained in natural gas, crude oil, and coal produces CO2 because the original material contains carbon.

Another method is the electrolysis of water. There are also methods to produce electricity from renewable energy sources such as wind power. The idea is to use these to create a carbon-free fuel that emits no CO2. However, renewable energy sources, such as wind and solar power, cannot be targeted to generate power as planned, and the power supply is unstable.

Therefore, the idea of converting renewable energy into hydrogen, storing and transporting it, and then using the hydrogen for power generation and fuel is spreading, especially in Europe. However, at the moment, this concept remains at the level of a concept.

I am not a proponent or a detractor of the use of hydrogen as an energy source. What is important is to recognize that it is not a battle for supremacy between hydrogen, oil, and batteries. This is the idea of the energy mix. Oil, gas, and hydrogen all have their own optimal ways of use. In the field of mobility, EVs are leading the way at the moment, but EVs themselves have the problem of final disposal of lithium-ion batteries.

Research on the use of hydrogen as an energy source is being conducted not only in Japan but also in Europe, the United States, and China, but Japan is one step ahead in terms of maturity and progress.

Achieving this goal in the next 10 years is a very tough; it is essential that the public and private sectors work together to achieve it. In order for FCVs to become widespread in the mobility field, priority must be given to the upstream process, i.e., the use of hydrogen in infrastructure and power plants and the spread of hydrogen stations. It will be a big challenge to see if Japan can achieve that level in the next 10 years. **PSR**

Click Here To Go To Page 1

Far East Report

Continued from page 11

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

水素を2030年に主要燃料に　目標1000万トン、国内電力1割分

政府は国内での水素利用量を2030年時点で1000万トン規模とする目標を設ける調整に入った。1000万トンで原子力発電所30基以上を稼働できる。稼働率を考慮しない単純計算で国内全体の設備容量の1割強にあたる。水素発電の実用化を急ぎ、FCVの普及も加速させる。新設する2兆円の基金を活用したり設備投資への税優遇などで支援する。

民間も動き出した。トヨタ自動車や岩谷産業など88社は12月7日、水素インフラの整備を進める「水素バリューチェーン推進協議会」を立ち上げたと発表した。

トヨタ	2020年12月中に航続距離を伸ばしたFCV新型ミライを発売予定
岩谷産業	船舶や鉄道、発電などの水素需要を拡大し、コスト削減に取り組む
三井物産	ブルネイで調達した水素を日本へ運ぶ実証実験に参画予定
関西電力	火力発電の水素混入の導入可能性を調査
東芝	福島県浪江町での世界最大級の水素製造拠点の実証実験に参画
エネオス	水素ステーションを全国で44ヶ所に展開中。今後も拡大していく計画
川崎重工業	2030年にも大型の水素運搬船の商用化を目指している
三菱重工業	水素を燃料にして二酸化炭素の排出量を減らす火力発電設備の開発を進める
神戸製鋼所	液化水素を運搬し貯蔵するのに必要な圧縮機などを手掛けている

水素では量産型FCV「ミライ」を発売したトヨタが民間の主導役を果たしてきた。ミライは9月までの世界販売が1万千台にとどまっている。2019年度の日本でのFCV販売はトヨタを含め約700台でEVの約2万台と比べると小さい。打開策として水素のフル充塡での航続距離を現在の約650キロメートルから約3割伸ばした新型ミライを12月中に発売する予定だ。

協議会は自動車以外でも水素の利用を促進していく。製鉄では鉄鉱石の還元を石炭由来から水素に切り替える。日本製鉄など高炉大手は2050年までに水素を使ってCO2排出を減らす技術の実用化を目指す。東京電力と中部電力が折半出資するJERAも発電燃料を水素に変え2050年にCO2排出量を実質ゼロにする。

一方でこうした水素を使った発電や製鉄の実現には大量の水素エネルギーを安く調達する必要がある。川崎重工業や岩谷産業、丸紅などは2018年からオーストラリアで「褐炭」と呼ばれる低品位炭から水素を製造、液化し、日本に船で運び、発電などに使う輸送する実証事業を始めている。2021年までに最初の水素製造・輸送試験を行う計画だ。岩谷産業や関西電力なども2025年に向けて水素で動く船の実用化を検討する。燃料電池を搭載し、水素と空気中の酸素を反応させてつくった電気で動かす

出典: 日経（一部筆者により元記事内容を改編しました）

Click Here To Go To Page 1

Far East Report

Continued from page 12

PSR 分析: 大きな潮流として、日本は水素を次世代のエネルギーにすることを本気で検討している。目標年を具体的に示したことで取り組みはさらに加速するだろう。その一方で、水素に否定的な意見が多く存在することも事実だ。否定の根拠は多岐にわたるが、安全性と環境性によるものが多い。安全性については「水素は爆発しやすく、非常に危険で恐ろしいもの」という認識がある。肯定派はこの意見に対して「確かに水素は爆発しやすく着火性が高い。だが、拡散が速く、万が一漏れてもすぐに薄まるため、着火しにくい。バーナーのようにガスの吹き出し口付近だけが燃えるイメージで、ボンベの内部まで引火したり爆発したりする可能性は低い。もちろん水素は、完全に安全というものではない。しかし、身近な存在であるガソリンも、扱うための国家資格があるように、相応の危険性はある。安全性を担保するための対策の法整備も進められている。水素ステーションを例にとると、立地の規制をはじめ、貯蔵設備の材料から、水素の充てん方法に至るまで、多岐にわたる規制が各種の法律で設けられている。こうした安全対策のために水素ステーションの建設・運営コストが膨れ上がり、政府が想定したほど設置が進んでいない。経済産業省は国土交通省や消防庁と共同で水素ステーションの規制を継続的に見直している。家庭用の燃料電池に関しては、すでに規制の緩和が進んでいる。一般社会が水素の安全性を誤解無く正しく理解するための啓蒙が必要なフェーズに来ている。」と反論する。

否定派のもうひとつの主張は「水素は、本当はクリーンではない」というものだ。これについては一部正しい。現在、一般に流通する水素は原油や天然ガスから作られていて、原料から水素を作るときにCO2を排出する。天然ガスや原油、石炭などに含まれる炭化水素から水素を作る方法は、元の物質に炭素が含まれるためCO2が発生する。他には、水を電気分解する方法がある。風力などの再生可能エネルギーから電力を作る方法もある。これらを用いれば、CO2を排出しないカーボンフリーな燃料が実現するというアイディアがある。だが風力や太陽光などの自然の力を使って発電する再生可能エネルギーは、計画通りに狙って発電することができず、電力供給が不安定になる。そこで自然エネルギーをいったん水素にして貯蔵・輸送し、その水素を発電や燃料などに使おうという考え方が欧州を中心に広まっている。だがこの考え方も現時点ではコンセプトのレベルに留まっている。

筆者は水素のエネルギー利用について肯定派、否定派、どちらに立つものでもない。ただ重要なのは、水素、石油、バッテリーの覇権争いではないという認識だ。エネルギーミックスという考えで、石油もガスも水素も、それぞれに最適な利用方法がある。モビリティ分野においては現時点ではEVが大きくリードしているが、EVそのものにもリチウムイオンバッテリーの最終処分の問題はある。水素をエネルギーとして利用する研究は、日本のみならず欧米や中国でも行われているが、その成熟度と進捗においては日本が一歩リードしているといってよい。あと10年での達成はかなり高い目標で、官民が協力して進めていくことが肝要だ。モビリティ分野においてFCVが広まるためには、上流工程、つまりインフラや発電所での水素利用や水素ステーションの普及が優先されるべきで、それぞれの局面で商売として儲かる状況になってはじめてFCVの台数は増える。あと10年で日本がそのレベルを達成できるか、大きなチャレンジになるだろう。**PSR**

Click Here To Go To Page 1

India Report

By Aditya Kondejkar, Research Analyst – South Asia Operations.

Kia Motors Targets Growth in Rural Markets

Aditya Kondejkar

Read The Article

Kia Motors is expanding its network and targets to reach 300 touchpoints by the end of the year. Further, the company will now focus on expansion in tier-IV and upcountry markets, which will further penetrate the Indian market.

The company is identifying the nerves of Indian customers. It has rightly understood that one of the critical factors in purchasing a car is consumers' proximity to the brand. Hence, even before the first product (Seltos) launch in the market, it had a wide-spread network in 160 cities with 265 touchpoints.

After having a grand entry in the Indian market, the company strategically makes India an export hub. Its latest vehicle – Sonet is being exported to over 70 countries across the world.

Now, the company is increasing reach by tapping the rural market. It will take care of dealer's profitability too.

"Along with focusing on reach, we also have to take into account our dealer partner profitability and, hence, both these will be the key elements driving our strategy for the next 2-3 years." – Tae Jin Park, ED & CSO, Kia Motors India.

The company's primary focus is to increase the reach and tap the rural market, expanding further in tier-IV and towns. Maruti Suzuki is the leader in the rural segment, and the market has a lot of potential. Post lockdown, the better demand of passenger cars from the area substantiates the market potential. **PSR**

Daimler India Adopts Aggressive Dealer Strategy

Daimler India, which recently set up 10 new touchpoints, plans to have at least 350 dealerships across India in the next two years as it looks to deepen market penetration. **Read The Article**

In September, DICV announced plans to grow its BharatBenz dealer network by 10%, exceeding 250 outlets by the end of 2020. With the opening of these new touchpoints, the company moves a step closer to cutting the distance between dealerships from 160 km to 120 km. The company is expanding strategically. The touchpoints are located on leading national and state highways, improving DICV's golden quadrilateral coverage.

Along with increasing domestic reach, the company is focusing on the export market. Post announcement of the production-linked incentive (PLI) scheme, the company plans to invest in the country. The new investment could be used to

Click Here To Go To Page 1

India Report

Continued from page 14

The new plant, which is scheduled to start production in 2022, Haval is expected to increase localization of its cars

increase the localization levels of components to avail the PLI. Furthermore, India has moved to BS-VI norms (equivalent euro 6 norms), it will be relatively easier for the company to cater to domestic as well as an export market with the same engines (with few moderations). **PSR**

Russia Report

By Maxim Sakov, Market Consultant, Russia

Haval Starts Building Motor Plant in Russia

Maxim Sakov

Production at the new plant is scheduled to begin in 2022, and will help Haval localize production of its cars.

The plant is located in Tula region, and its production should be enough to produce engines for more than 90% of the Haval cars sold in Russia.

Investment in the project is estimated to be about US$ 55 million (4 billion Rubles). Planned annual production capacity is 80K engines. **Read The Article**

PSR Analysis: This event is an example of the strategy to develop relationships between the Russian government and large international OEMs. Large car makers are allowed to sell their product in Russian market while they bring production capacities (and technologies) into the country. **PSR**

Increased Utilization Fees for Vehicles Planned

Russian authorities plan to increase vehicle utilization fees in 2021, according to automotive sources.

Utilization fees could be increased by as much as 25-30% for all types of vehicles, including special machinery, according to industry sources. This measure would be accompanied by a comparable devaluation of the national currency, which would reduce trade barriers.

Utilization fees were implemented in 2012. It was always considered as a compensation of Custom's tax reduce after Russia's entry into WTO. It was set in Russian Rubles. Initially, the fees were paid by the importers only. However, they later were expanded to everybody, but then local OEMs started receiving industrial subsidies, compensating for this fee. **Read The Article**

PSR Analysis: With reduced tax collection and increased State expenses in 2020, Russian authorities are seeking sources to compensate for income losses. Increasing utilization fees is one way to do this. **PSR**

Click Here To Go To Page 1

Russia Report

Continued from page 15

KAMAZ Launches First Dump Truck Sharing Service

The new KAMAZ truck sharing service works on the classic vehicle sharing model. The company provides a ready-to-use vehicle; the client just needs to fuel it. Optionally, the client can rent the truck with the driver.

It's possible to take a truck for a period of one day up to one year. The fleet available for rent includes modern dump trucks KAMAZ-65801 up to 32 ton capacity, which is one of most popular models on the market.

Truck sharing includes the same options as the sharing of passenger cars. The client does not need to worry about service and can use the truck as his own. The cost of sharing includes all required maintenance. (except fuel), and the truck is fully insured.

Truck sharing is an alternative to leasing or renting. The client takes truck for short-term business targets and pays only for this time.

At the moment, truck sharing is available in Tatarstan. In Q1 2021, it's planned to open this business in Moscow, then in St.Petersburg and in Krasnodar.
Read The Article

PSR Analysis: KAMAZ has found interesting market niche, which is empty (or almost empty) at the moment. **PSR**