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DATAPOINT: *US Hydraulic Power Units* **6,800**

By Carol Turner, Senior Analyst, Global Operations

6,800 units is the estimate by Power Systems Research of the number of Hydraulic Power Units to be produced in the United States during 2022.

A Hydraulic Power Unit (HPU) usually refers to a self-contained, free-standing engine assembly that is used to drive one piece of equipment. HPUs are powered by internal combustion engines or AC/DC electric motors.

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.

Market Share: Dominating production of HPUs in NA is Stanley Hydraulic with 49% of total units produced. In second position is Great Northern (Brave) with 9.5%. Tradewinds Powers is third with 8%.

Trends: Production of HPUs in the US increased 22% from 2020 to 2021. Production is expected to increase another 6% in 2022. Hydraulic Power Units (power packs) are used in a variety of applications and industries ranging from marine, construction and military applications.

The overall gain in 2022 is attributed to the increase in construction and marine related activities. This product segment will continue to increase steadily over the next 5 years as warranted by current economic conditions and related demands. Expect an additional 10% increase by 2025. **PSR**

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Europe Report

By Christopher Bamforth, Analyst – European Operations

Plant-Based Bio-fuel May Not Replace Fossil Fuels



*Christopher
Bamforth*

Over the last decade we have worked to reduce fossil fuel consumption in Europe without cutting back the use of our cars, trucks, and motorbikes. It was thought that by mixing diesel and fuel with crop-based bio-fuel it would reduce fossil fuel usage.

However, over the last 30 years the emission of CO2 has increased, raising questions about the effectiveness of this measure. After extended analysis from the Environmental Action Germany (DUH), it has been concluded that this may not be a solution to the problem of reducing carbon emissions.

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Europe Report

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This has an impact on other renewable energy solutions that we have implemented over the last few years as well as future decisions. It is very important to analyse each aspect and impact of these and future solutions going forward.

Consider that the production and consumption of immense areas of land across the globe dedicated to the cultivation of these fuels actually have a huge environmental cost. For example, to satisfy Germany's appetite for these natural bio-fuels, 1.3 million hectares of land have been converted to its production. This equates to 9.2 million tons of CO2 saved each year. However, if we were to dedicate this land to natural restoration projects with a portion dedicated to solar energy production, we would be able to save 27.5 million tons of CO2 each year.

Source: *Euronews.Green* [Read The Article](#)

Source: [PSR OE Link™](#)

PSR Analysis: In light of this new information, it is critical that good decisions are made going forward. As we can see, this decision has actually had a positive impact on the environment, already saving 9.2 million tons of CO2 each year. However, we could be saving much more, up to an additional 18.3 million tons of CO2 each year.

At the same time, the actual farming of these crops to convert into bio-fuel has a higher environmental impact than if we were to just let nature take its place. This would have a very positive impact on biodiversity and provide a home for endangered species.

This has an impact on other renewable energy solutions that we have implemented over the last few years as well as future decisions. It is very important to analyse each aspect and impact of these and future solutions going forward. Currently, we are seeing a number of different solutions in the industry provided by OEMs without at this point having a clear understanding of which solution would be best moving forward. These are indeed very interesting times and the race to a cleaner world has effectively started. **PSR**

Brazil/South America Report

By Fabio Ferraresi, Director Business Development-South America

Komatsu Announces Expansion in Brazil



*Fabio
Ferraresi*

Komatsu announced planned investment of US\$ 30 million (R\$ 158 M) for a second cycle of production capacity expansion of its Suzano Plant in Brazil. According to Komatsu, production capacity will be increased 26%. Komatsu has invested US\$ 20 million (R\$ 100 M) during the last three years for 32% capacity expansion and improvements in safety and environmental impact.

Source: *M&T Magazine* [Read The Article](#)

PSR Analysis: The expansion meets Komatsu and Brazilian CE market growth during the last three years and the forecast for growth in the coming years.

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South America Report

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Komatsu has been producing strong business in Construction Equipment and especially in mining equipment in Brazil. Komatsu has been emphasizing high value added products in service and after sales.

Agrishow 2022 Sells US\$ 5 Billion in Ag Equipment

Following two years with the show canceled because of COVID-19, the 2022 edition of the biggest agricultural segment trade show reached US\$ 5.5 Billion (R\$ 11.2 Billion) in equipment sales, including Agricultural Machines, irrigation equipment and storage equipment. A total of 193,000 people visited the show, including our team of PSR representatives in South America. This year's sales are 287% over the R\$ 3.9 Billion sales posted in 2019.

Source: *Info Money* [Read The Article](#)

PSR Analysis: The result indicates the continuous growth of the Agricultural Equipment Market and the overall Agricultural Business in Brazil. A record harvest is expected in 2022 with 6.4% increase forecasted over 2021. The forecast for next 10 years is more crops with higher productivity--that means more technology with new machines. **PSR**

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China Report

By *Jack Hao*, Senior Research Manager - China

Beijing Plan Calls for 100% EV Commercial Vehicles



Jack
Hao

Under its new Five Year Plan, Beijing will expand restriction on the use of vehicles entering Beijing. At the same time, Beijing will restrict the use of China III diesel trucks and will implement regional traffic restrictions during peak hours of working days, strengthen the management of illegal electric three and four wheeled vehicles, and implement a preferential traffic policy for new energy logistics and distribution vehicles.

The Five Year Plan also calls for the promotion of low-carbon new energy transportation tools, and the promotion of "oil for electricity" of vehicles in public transport, rental (including cruise and online appointment), tourism and freight transportation.

Today, 69,000 diesel trucks have been eliminated in Beijing, and the proportion of clean energy and new energy vehicles in public transportation has reached 90.2%. Beijing plans to accelerate the promotion of new energy intelligent vehicle technology and cost reductions in many applications.

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China Report

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Source: *Auto China* [Read The Article](#)

PSR Analysis: Driven by the national "double carbon" strategy and the new energy vehicle policy, new energy commercial vehicles are developing rapidly. The growth rate of new energy logistics trucks has increased, becoming a strong market to promote new energy logistics trucks.

New energy light truck logistics vehicles serving the urban distribution market have zero carbon emission and feature convenient charging. There is no lack of endurance. In addition, the cost of pure electric is relatively low.

The government advocates that most customers operating in the urban distribution logistics market prefer to buy pure electric logistics light trucks. In 2021, the sales volume of new energy logistics trucks increased by 1.72 times year-on-year, which became the driver to promote rapid growth of new energy logistics vehicle industry in 2021.

Mainly because of the strong promotion of the national "double carbon" goal and various national and local policies to support and encourage the development of the new energy logistics vehicle market, the new energy logistics truck began to enter the track of rapid development in 2021. It will continue to accelerate development in the next five years.

Many provinces and cities such as Beijing and Tianjin have issued transportation development and construction plans during the 14th Five Year Plan period, which has made key deployment in optimizing and adjusting the cargo transportation structure.

Other provinces and cities are expected to follow this policy, which is definitely a major opportunity for the development of new energy light trucks. **PSR**

Far East: Japan Report

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

MEGURI2040: The Fully Autonomous Ship Program



*Akihiro
Komuro*

The Nippon Foundation, Mitsubishi Heavy Industries Group company Mitsubishi Shipbuilding Co., Ltd., and Shin Nihonkai Ferry Co., Ltd. have successfully completed a demonstration test of the world's first fully autonomous ship navigation systems on a large car ferry, conducted on the Iyonada Sea from Shinmoji, Kitakyushu City, in January.

This demonstration was part of MEGURI2040, a fully autonomous ship navigation project launched by The Nippon Foundation in February 2020.

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Far East Report

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Japan's declining birthrate, aging population, and shrinking population have resulted in labor shortages in many fields.

Japan's declining birthrate, aging population, and shrinking population have resulted in labor shortages in many fields. Seafarers in coastal shipping, which requires hard work on board, are no exception. More than half of the seafarers in coastal shipping are over 50 years old, which poses a major challenge.

In addition, there are approximately 400 inhabited remote islands in Japan, many of which have only two services a day, morning and evening, and there are not enough services for daily life. Furthermore, there is a large number of maritime accidents and human error is said to be responsible for approximately 70% to 80% of these accidents. Unmanned vessels are expected to be one of the solutions to these social issues.

Currently, demonstration tests of unmanned operations are being conducted mainly in automobiles. In marine transportation, however, the development of unmanned vessels has been almost nonexistent due to the technical difficulties in developing communication systems between land and ship. Avoiding obstacles is also a challenge.

Economic concerns such as the high costs required for the development of such a system also pose a problem.

Japan possesses world-class technologies, including IoT, AI, and image analysis technologies, and the joint development of these technologies by multiple private companies potentially could dramatically advance the development of unmanned ships.

There are five consortia within MEGURI 2040, each developing new equipment, systems, and mechanisms. The five are described below.

1. Creating the Future of Unmanned Vessels: A Grand Design by Diverse Experts

More than 30 companies in Japan have come together to develop an unmanned navigation system for container ships. Development will be carried out under an open innovation system, with the aim of social implementation. A land-based support center has been established in Makuhari, Chiba Prefecture, to enable ship operations from land in the event of an emergency.

2. Unmanned Technology Demonstration Experiment for Coastal Containerships and Car Ferries

Development of unmanned operation systems for containerships and ferries is underway. For ferries, a successful autonomous navigation system has been demonstrated in harbors, including takeoff and landing functions. In addition, a drone-based mooring support system for container vessels is also under development.

3. Development of Amphibious Unmanned Operation Technology - Yamba Smart Mobility

An unmanned operation system for amphibious vessels is being developed for Lake Yamba-Agatsuma in Gunma Prefecture. The system extends automobile self-driving technology to enable unmanned operation on the water. They are

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Far East Report

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Battery-powered ships already exist in the market, but they are not yet mature. It will take at least another 5 to 10 years for the market to put them to practical use.

also developing a land-based monitoring and operation system using local 5G for communication.

4. Unmanned Vessel at Sarushima, Yokosuka, Japan

A system for unmanned operation of small sightseeing boats on Sarushima Island in Yokosuka is being developed, including a system that uses three cameras to detect other vessels and automatically steer clear of them.

5. Development of Smart Ferry

A new vessel equipped with a system for unmanned operation is being built and developed for the ferry that operates between Shin-Moji and Yokosuka.

The ferry will begin manned operation on July 1, 2022, and data for unmanned operation is being accumulated.

Source: The Nippon Foundation

PSR Analysis: While technological innovation is required in the shipping industry, this initiative by the Nippon Foundation stands out. The demand is clearly there, and progress in development is expected, as unmanned vessel operation would not only reduce labor costs but could also lead to a reduction in the serious shortage of human resources.

The electrification of ships is still in the dream stage. The batteries themselves are heavy, and even though the catalog values for small battery-powered ships indicate a five-hour operating time, the actual operating time is barely two hours, so the performance of the batteries themselves must be improved.

Battery-powered ships already exist in the market, but they are not yet mature. It will take at least another 5 to 10 years for the market to put them to practical use. In the area of new fuels, there is a noticeable trend toward reducing CO2 emissions by using DUAL FUEL (LNG and diesel) and ammonia as fuels, mainly in the merchant ship sector.

The MEGURI2040 introduced here is different in theme from the electrification and new fuel and is aimed at unmanned small ferries and small domestic vessels. I believe that the unmanned technology has a high potential for future business viability, as it is expected to be applied to a wide range of vessels once the series of unmanned technology matures.

Of course, there are various issues that need to be addressed. The most significant of these is the need to ensure safety. It is essential to establish the know-how to deal with accidents and problems. Unlike on land, help will not come immediately in the event of trouble on the water. Basically, everything must be handled on board, but what should be done when the ship is unmanned? The key point will be how to respond to irregular events. **PSR**

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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

無人運航船プロジェクト「MEGURI2040」

日本財団、三菱重工グループの三菱造船株式会社、新日本海フェリー株式会社は、1月に北九州市新門司から伊予灘で実施した大型カーフェリーによる世界初の完全自律型船舶航行システムの実証実験に成功した。この実証実験は、日本財団が2020年2月に立ち上げた完全自律型船舶航行プロジェクト「MEGURI2040」の一環として行われたものだ。

日本では、少子高齢化、人口減少が進んでおり、あらゆる分野で人手不足が進んでいる。船上でのハードな仕事を要求される内航海運の船員もその例外ではない。内航海運の船員の半分以上が50歳以上であり、大きな課題となっている。また、日本には約400の有人離島があるが、朝夕の1日2便のみ航路が多数あり、生活航路として便数不足であるなど、離島航路の維持も喫緊の課題となっている。さらに、海難事故の原因の約7割から8割がヒューマンエラーといわれており、事故減少が求められている。無人運航船はこうした社会課題の解決策の一つになると考えられる。

現在、自動車の分野を中心に無人運転の実証実験が進められているが、海運については、船陸間の通信環境整備や障害物を瞬時に避けることが難しいなどの技術面、開発への莫大な資金が必要などの経済面から、これまで無人運航船の開発はほとんど行われてこなかった。一方で日本は、IoT、AIや画像解析技術をはじめ、世界的に高い技術を保持していることから、これらの技術を持つ複数の民間企業が共同で技術開発を行うことで、無人運航船にかかる技術開発を飛躍的に進められる可能性がある。

MEGURI2040内には5つのコンソーシアムがあり、それぞれが新しい装備やシステム、仕組みを開発している。以下にその5つを説明する。

1. 無人運航船の未来創造～多様な専門家で描くグランド・デザイン～

コンテナ船を対象として、無人運航システムを国内30社以上が集結して開発。オープンイノベーション体制で開発を進め、社会実装を目指す。緊急時には陸上から操船を可能とする陸上支援センターを千葉県に構築している。

2. 内航コンテナ船とカーフェリーに拠る無人化技術実証実験

コンテナ船とフェリーを対象として、無人運航システムの開発を進めている。フェリーでは離着陸機能を含め、港内自律操船機能の実証実験に成功している。また、コンテナ船ではドローンを用いた係船支援の開発も行っている。

3. 水陸両用無人運転技術の開発～ハッ場スマートモビリティ～

群馬県・ハッ場あがつま湖で、水陸両用船を対象として、無人運航するシステムの開発を進めている。自動車の自動運転技術を拡張し、水上での無人運航をできるようにしている。また、通信にはローカル5Gを用いて、陸上での監視・運転システムの開発も行っている。

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Far East Report

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Hyundai Motor Indonesia (HMID) said it has signed contracts for more than 800 units of the Ioniq 5 EV announced at the Indonesia International Motor Show (IIMS) Hybrid 2022 in Jakarta.

4.無人運航船@横須賀市猿島

横須賀の猿島にわたる小型観光船に無人運航を実現するシステムを搭載。3台のカメラから他の船を検出し、自動で他船をさけるシステムの開発などを行っている。

5.スマートフェリーの開発

新門司～横須賀間を運航するフェリーを対象として、無人運航を実現するシステムを搭載した新造船を建造、開発を進めている。7月1日よりフェリーの有人での運航を開始し、無人運航のためのデータの蓄積を進めている。

出典: 日本財団 (一部筆者により元記事内容を改編しました)

PSR 分析: 船舶業界にも技術革新が求められているなか、日本財団のこの取り組みが目立つ。無人での船舶運航が可能となれば人件費を削減することのみならず、深刻な人材不足の低減にもつながる可能性があるため、そこに需要があることは明白であり、開発の進捗が期待されている。

船舶の電動化はまだまだ夢物語の段階だ。バッテリー自体が重く、小さなバッテリー船のカタログ値では駆動時間5時間でも実際の駆動時間は2時間が精いっぱいという状況で、バッテリー自体の性能向上が必要だ。バッテリー船はすでに市場にも存在するが、まだまだ成熟していない。市場の実用には最低でもあと5～10年かかる。新燃料関連では商船分野を中心に、LNGとディーゼルのDUAL FUELや、アンモニアを燃料に活用することでCO2削減をしようという動きが目立つ。

今回ここで紹介したMEGURI2040はそれらの電動化や新燃料とはテーマが異なり、小規模フェリーや小型内航運搬船の無人化を目的としたものだ。だが、無人化の一連の技術が成熟すれば多くの船舶への技術転用が期待できることから、ビジネスとして将来的に成立するポテンシャルは高いと筆者は考えている。もちろん様々な課題は現時点であるだろう。その中で最も大きいのは、安全性の担保、ということになるだろう。事故やトラブルが発生した時の対応ノウハウの確立は必須だ。陸上とは異なり、船は洋上でトラブルが発生してもすぐに助けは来ない。基本的に船内ですべてを賄う必要があるが、船が無人の場合はどうすればよいのか。イレギュラーな事象への対応をどうするか、がキーポイントになるだろう。 **PSR**

Far East: South Korea Report

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

Hyundai Sells More Than 800 EVs at Indonesia Auto Show

Hyundai Motor Indonesia (HMID) said it has signed contracts for more than 800 units of the Ioniq 5 EV announced at the Indonesia International Motor Show (IIMS) Hybrid 2022 in Jakarta.

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Far East Report

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The company announced that it has started mass production of the Ioniq 5 and that it will begin shipping to dealers in April. The Creta SUV was the second most sold model after the Ioniq 5, with approximately 600 units sold, bringing the total number of vehicles sold to over 1,500, including EVs and gasoline-powered vehicles.

Source: NNA

PSR Analysis: According to the Association of Indonesian Automobile Manufacturers (Gaikindo), HMID had sold a total of 588 units of the Kona Electric and Ioniq Electric, EV small SUVs, in 2021. This shows how significant the number of orders at the show was.

Many auto shows in Southeast Asia are different from those in North America and Japan, with more emphasis on business negotiations. The atmosphere is more like an exhibition and sales hall. This news is also indicative of the strong local interest in EVs and the recovery of purchasing power in the region.

The Hyundai brand is becoming increasingly well known in Southeast Asia each year, and as competition intensifies, Hyundai's market share is expected to grow in tandem with the growth. **PSR**

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小室 明大 – 極東及び東南アジア リサーチアナリスト

現代自、インドネシア自動車展でEV800台以上成約

ヒュンダイ・モーター・インドネシア (HMID) は、ジャカルタで開催された「インドネシア国際モーターショー (IIMS) ハイブリッド2022」で、国内で量産を開始したEV「アイオニック5」を800台以上成約したと発表した。「アイオニック5」はすでに量産を開始し、4月からディーラーへ出荷することを明らかにしている。「アイオニック5」に次いで販売台数が多かったのは、SUV「クレタ」で約600台だった。EVとガソリン車を含めた全車種の成約台数は1,500台を超えた。

出典: NNA (一部筆者により元記事内容を改編しました)

PSR 分析: インドネシア自動車製造業者協会 (ガイキンド) によると、HMIDは2021年にEVの小型SUV「コナ・エレクトリック」と「アイオニック・エレクトリック」で計588台を販売していた。今回の受注台数がいかに大きなものだったかがわかる。東南アジアの多くの自動車ショーは、北米や日本のそれとは若干趣が異なり、商談により重きが置かれている。大規模な展示即売会場のような雰囲気だ。このニュースは現地のEVへの興味の強さと購買力が回復してきたことも併せて示しているといつてよい。現代ブランドの東南アジアにおける知名度は年々強さを増しており、競争が激化するなかで、価格と性能のバランスが評価されて、現地EV市場の伸長と共に現代のシェアも伸びていくと思われる。 **PSR**

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Southeast Asia: Vietnam Report

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

Vietnam's Dat Bike EV Motorcycle Enters SE Asia

Vietnamese electric bike manufacturer Dat Bike says it has raised \$5.3 million. This brings the total raised by Dat Bike, founded in 2019, to \$10 million. The funds will be used to invest in technology, increase production, expand operations to major cities in northern, central, and southern Vietnam, and hire skilled workers.

Dat Bike is a tech startup that plans to promote environmentally friendly transportation, first in Vietnam and then soon in Southeast Asia. The company's strength lies in the performance of its electric bikes compared to gasoline-powered bikes. The company achieves this through vertical integration, in which key components such as speed controllers and batteries are designed and manufactured in-house.

The company currently sells two products: the Weaver, launched in 2019, has an output of 5 kW, about three times that of most electric bikes in the same price range. It has a range of 100 kilometers, about twice as long as competing models.

In November 2021, the company launched a second model, the Weaver 200. It has a range of 200 kilometers, twice that of the Weaver, and is even more powerful, with an output of 6 kW. Charging time has been reduced to 1 hour for a range of 100 kilometers and 2.5 hours for a full charge of 200 kilometers. Other electric bikes take 6-8 hours.

Son Nguyen, founder of Dat Bike, has high expectations for the market, saying, "With a population of 660 million and a motorcycle penetration rate of over 80%, Southeast Asia is a market with great potential."

Jungle Ventures in Singapore, which led the funding round, said that with a market size of \$25 billion, the Southeast Asian motorcycle industry is at the forefront of electrification.

Source: The Nikkei

PSR Analysis: When looking at the mobility market in Southeast Asia, observers often look first to Thailand and Indonesia. These two countries certainly are important in terms of market size and maturity. However, when it comes to EVs, Vietnam cannot be ignored. As a motorcycle powerhouse, Vietnam has abundant domestic demand for motorcycles, and there is strong interest in the market for EV motorcycles, led by VINFAST.

Dat Bike's primary selling point is that its products are competitive with conventional gasoline models in terms of performance and price. Its price tag of 39.9 million VND also corresponds to the median price of a gasoline-powered motorcycle. Also, Dat Bike has partnered with banks and financial institutions to offer its customers 12-month interest-free payment plans.

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Southeast Asia Report

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Another of Dat Bike's strengths is that it manufactures its own products with locally sourced components. Being able to manufacture without relying on sourcing from China or other countries avoids the instability of global supply chains, and in terms of taxation, being able to source parts domestically is a big advantage, given the 45% import duty on bikes and the 15-30% import duty on parts.

On the other hand, there are no tariffs on exports within Southeast Asia. This situation gives Dat Bike a significant advantage over bikes imported from outside Southeast Asia.

Overcoming the two main weaknesses of conventional EV bikes, the lack of power and high price, I believe that Dat Bike will continue to grow and make great strides in the next three to five years as it expands its business area from Vietnam to Southeast Asia. **PSR**

東南アジア > ベトナムレポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

ベトナム電動二輪のDat Bike、東南アジアへ

ベトナムの電動バイクメーカーDat Bikeが530万ドル（約6億9000万円）を調達したと発表した。これにより、2019年に創業したDat Bikeの調達総額は1000万ドルになった。今回調達した資金は技術への投資や増産、ベトナム北部、中部、南部の主要都市への事業拡大、優秀な人材の採用に振り向ける。

Dat Bikeはまずはベトナム国内で、近い将来には東南アジアで、環境に配慮した移動手段の普及を目指すテックスタートアップだ。同社の強みはガソリンエンジンのバイクと比較した場合の電動バイクの性能の良さにある。速度制御装置やバッテリーなどの主要部品を社内で設計、製造する垂直統合によってこれを実現している。現在は2つの製品を販売している。2019年に発売した「Weaver」は出力が5kWと同価格帯の大半の電動バイクの約3倍、航続距離が100キロメートルと約2倍に上るといふ。2021年11月には、2つ目のモデル「Weaver 200」を発売した。航続距離はWeaverの2倍の200キロメートル、出力は6kWとさらに強力だ。充電時間は走行距離100キロメートルで1時間、200キロメートルのフル充電で2.5時間に短縮した。他の電動バイクは6～8時間かかる。

Dat Bikeの創業者Son Nguyen氏は「人口6億6000万人、二輪車普及率が80%を超える東南アジアは大きな可能性を秘めた市場だ」と期待を寄せている。

資金調達ラウンドを主導したシンガポールのJungle Venturesの副社長は声明で「市場規模250億ドルの東南アジアの二輪車業界は電動化の先端に立っている。この市場を電動化するというSon氏の確固たる決意の根底にあるのは環境の脅威に対する鋭い認識で、Dat Bikeの他社にはない高性能によってこれを実現している」と称賛した。

出典: 日経（一部筆者により元記事内容を改編しました）

PSR 分析: 東南アジアにおけるモビリティ市場を俯瞰する時、誰しもがまずタ

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Southeast Asia Report

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イとインドネシアを見ようとする。市場規模や成熟度においてこの2国が重要であることは確かだ。だがEVとなると、ベトナムの存在を無視することはできない。もともと2輪大国であるベトナムは、二輪にとって豊かな内需を持っており、またEVバイクに関してもVINFASTを筆頭に強い興味が市場にある。

彼らの製品の特長は従来のガソリンモデルと性能・価格の両面に対抗できる、というのがセールスポイントになっている。Weaverは同社のフラッグシップモデルで、東南アジアでの重要な仕様である2人乗りで、5,000Wのモーターを搭載し、0から50km/hを3秒で加速する。3,990万ベトナムドンという価格設定もガソリンバイクの中央値に相当する。Dat Bikeは銀行や金融機関と提携して、顧客に12ヶ月の無利息支払いプランを提供している。

もうひとつの彼らの強みは、地元で調達した部品で自社生産している点にある。中国や他の国からの調達に頼らず製造できるのは、グローバルサプライチェーンの不安定さを回避でき、また税制面でも、バイクの輸入関税は45%、部品の輸入関税は15から30%があるため、国内で部品を調達できるのは大きなメリットである。その一方で、東南アジア域内への輸出には関税はかからない。この状況は東南アジア域外からの輸入バイクに比べて、Dat Bikeに大きな優位性がある、といえるだろう。

従来のEVバイクの弱点であったパワー不足と高価格というふたつの懸念点を克服し、Dat Bikeは今後3～5年で大きな成長を続け、ベトナムから東南アジアへ商圏を拡大するとともに飛躍するだろうと私は見ている。 **PSR**

India Report

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



*Aditya
Kondejkar*

PMI Electro To Set Up EV Manufacturing Plant in Maharashtra

Electric bus maker PMI Electro announced the setting up of its largest EV manufacturing plant with annual production capacity of 2,500 vehicles at Chakan in Maharashtra.

Source: *Economic Times*. **Read The Article**

PSR Analysis. PMI operates a manufacturing facility in Delhi, India's capital region, which has an annual production capacity of about 1,500 electric buses. With the planned facility in Pune, the total annual manufacturing capacity of PMI will grow to 4,000 electric CVs, the company said. The new plant will be capable of manufacturing electric CVs in multiple variants as well as electric trucks.

The company said it has received an order size of 1,000 electric CVs (Commercial Vehicles) under FAME-II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme of the central government.

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India Report

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Tata Motors recently unveiled the electric avatar of its most popular small commercial vehicle Ace.

Tata Motors: Electrification Is an Irreversible Trend

Tata Motors recently unveiled the electric avatar of its most popular small commercial vehicle Ace. The company said it has booked orders for 39,000 units from top e-commerce players. India's largest commercial vehicle manufacturer plans to transform commercial vehicles to achieve a net-zero target by 2070 for the country. **PSR**

Russia Report

By *Maxim Sakov*, Market Consultant, Russia Operations

Editor's Note: Power Systems Research has paused all research and business development activities in Russia. We have maintained a presence in Russia since 2013 to bring important updates to our clients about the powered equipment markets within Russia. We are monitoring the current situation on a daily basis 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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