

EV monthly Updates

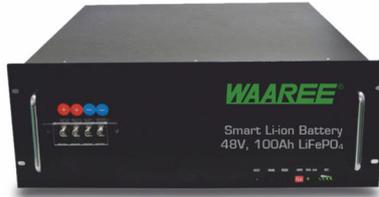
July 2020

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** Images of product are for representative purpose only and actual product may differ from the images depicted.

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1. New Product Launches

Table 1.1: New Product launches in July 2020

Product	Vehicle Type	Battery Specs	Other Specs	Price
BGauss A2	2-wheeler	<ul style="list-style-type: none"> Range – 110 km Battery type – (Lead acid/ Li-ion) 60V, 22.3Ah/ 1.29kW 	<ul style="list-style-type: none"> Charging time <ul style="list-style-type: none"> Lead acid: 7 to 8 hrs Li-ion: 2.25 hrs Motor - 250W (Peak) Top speed - 25km/h 	Rs. 52,499 - 67,999 (ex-showroom)
BGauss B8	2-wheeler	<ul style="list-style-type: none"> Range – 78 km Battery type – (Lead acid/ Li-ion) 60V, 22.3Ah/ 1.45kW 	<ul style="list-style-type: none"> Charging time <ul style="list-style-type: none"> Lead acid: 7 to 8 hrs Li-ion: 3 hrs Motor - 1900W (Peak) Top speed - 50km/h 	Rs. 62,999 - 88,999 (ex-showroom)

Upcoming Launches

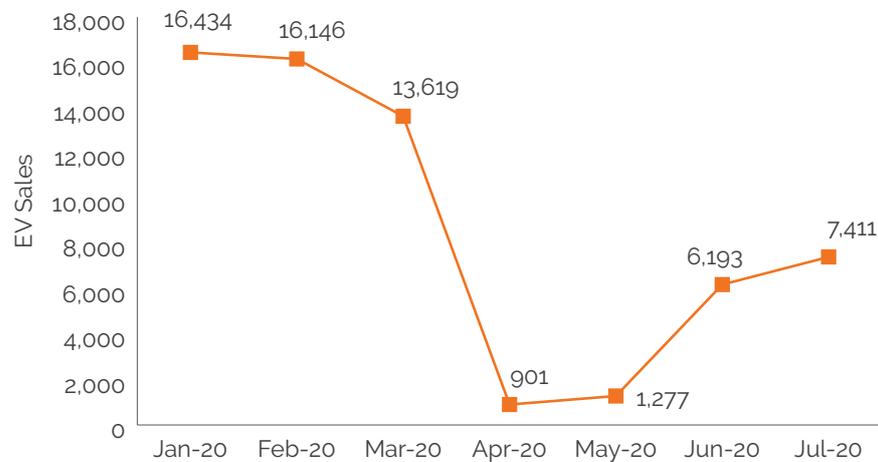
Simple Mark 2 'smart' electric scooter to launch in Feb 2021: 280 km range, 100 kmph top speed

Simple Energy has announced the launch timeline of its first electric scooter which boasts 280 km of range and a top speed of 100 kmph in Sports mode. Simple Mark 2 would not be priced more than Rs 1.1 lakh. It gets 4.2 kWh of usable capacity delivering 9.4 hp of peak power output and 72 Nm of torque. The battery pack is portable and would have a (0-100%) charging time of about 1 hour.

2. High-speed EV Sales

Sales of high-speed EVs for July 2020 indicate a modest growth relative to June sales. July sales rose by about 19.6% over previous month's record. The cumulative sales of high-speed EVs so far for 2020 is 61,981.

Fig 2.1: High speed EV Sales trend, 2020



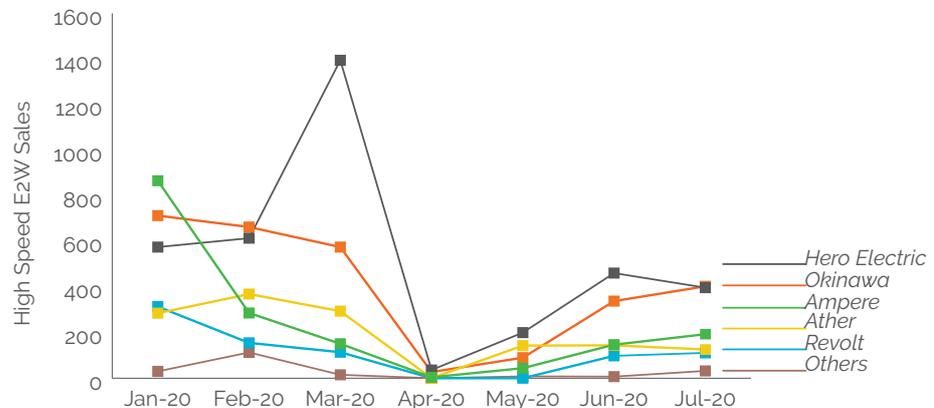
Source: Vahan Dashboard, JMK Research

Note: Sales figure are for only high range E2W models with speed higher than 25kmph

Electric Two Wheelers (E2W)

The July 2020 sales of Ampere, Okinawa and Revolt saw positive growth of more than 13% when compared to their June 2020 sales. Okinawa maintains the segment lead with sale of more than 400 units in July 2020.

Fig 2.2: Player-wise high-speed E2W sales trend



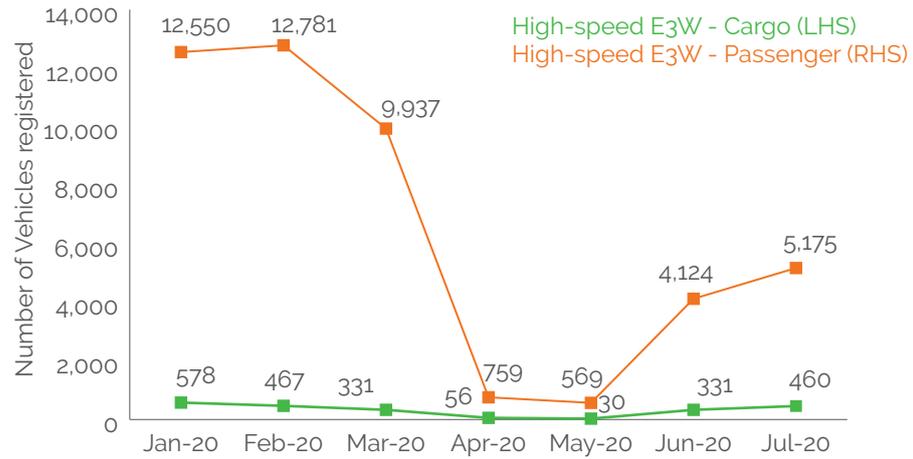
Source: Vahan Dashboard, JMK Research

Note: Sales figure are for only high range E2W models with speed higher than 25kmph

Electric Three Wheelers (E3W)

The passenger-type high-speed E3W accounts for nearly 95.3% of the total high-speed E3W sales. The combined sales of cargo and passenger high-speed E3W in 2020 (Jan-July) stood at 48,148 units. With 5635 units, the July sales increased by 26.5% over the sales in June.

Fig 2.3: Sales trend of high-speed cargo E3W and high-speed passenger E3W



Source: Vahan Dashboard, JMK Research

Note: Sales figure are for only high range E2W models with speed higher than 25kmph

3. Policies

Draft on Specific Requirements for Electric Power Train released by Automotive Industry Standards Committee (AISC)

AISC has formulated two drafts on specific requirements for electric power train vehicles. The last date for comments on both these drafts is 15th August 2020. In addition to specific requirements for the electric power train each draft also constitutes a section on the requirements of a Rechargeable Electrical Energy Storage system (REESS) with regard to its safety.

Table 3.1: Policies

S.No.	AIS Code	Drafts	Vehicle Category
1	AIS 038 (Rev. 2)	Specific requirements for electric power train of vehicles	M & N
2	AIS-156/DF	Specific requirements for L category electric power train vehicles	L

Category L
Category M
Category N

- Motor vehicles with less than four wheels;
- Power-driven vehicles having at least four wheels and used for the carriage of passengers;
- Power-driven vehicles having at least four wheels and used for the carriage of goods.

No more spare wheel in cars with tubeless tyres: Govt's new regulation

The Ministry of Road Transport and Highways has recently made amendments in CMVR. As per the ministry, the new cars would be provided with tyre repair kits and TPMS instead of spare tyres. This is as per the international standards and will enable more space to accommodate batteries for EVs.

TPMS monitors inflation pressure of the tyre or its variation and transmits the information to driver, thereby enhancing the road safety.

Housing societies, malls must reserve 20% parking for e-vehicles in Delhi

The new municipal rules have made it mandatory to reserve 20% of parking space for electric vehicles — with the provision of charging infrastructure — in all future projects, including malls, hospitals, public buildings, housing societies and commercial complexes. The reserved parking spots would have to be displayed in the building layout plan, without which approval would not be granted.

The officials said the proposal in this regard was moved by the Union ministry of power last year, based on future projections that almost 20 per cent of vehicles would be electric in variety. The provision has now been incorporated in the building bylaws of the city and been notified by Delhi Development Authority.

FICCI urges govt to extend FAME-II for two years to boost EV demand

Industry body FICCI has recommended various measures, including the continuation of the FAME-II scheme till 2025, along with short term 'booster incentives' under the scheme for 12 months to enhance demand for electric vehicles. FICCI has sought extension of subsidy support for electric two-wheelers and electric three-wheelers with swappable battery to encourage EV ecosystem. The industry body has also recommended that retail financing for EVs should be made part of priority sector lending, for higher financing availability by banks to these vehicles.

The other recommendations include a review to improve the e-buses procurement criteria and scheme design under FAME II with industry consultation to promote e-buses, as well as a Rs 10 crore support towards setting up in-house R&D infrastructure to come up with Make-in-India product and develop advanced technology for EV two-wheelers. FICCI has also sought formulation of a policy to incentivise all major e-commerce players to convert their last-mile delivery operations to all-electric by 2025.

All the suggestions have been submitted to NITI Aayog, the Department of Heavy Industry, Ministry of Road Transport and Highways and other relevant authorities in the government.

4. Charging Infrastructure

India's first public Electric Vehicle charging plaza inaugurated

In yet another bid to usher in the age of electric mobility, India's first public EV (electric vehicle) charging plaza was inaugurated at Chelmsford Club, New Delhi. The charging plaza has been set up with a focus on enhancing energy efficiency and promoting e-mobility. This plaza will host 5 EV chargers of different specifications. The plaza has been established by EESL (Energy Efficiency Services Ltd in collaboration with NDMC (New Delhi Municipal Council).

EESL plans 10 EV charging plazas in FY21

Power PSUs' joint venture EESL plans to install around 10 electric vehicle (EV) charging plazas in the country during the 2020-21 fiscal. The joint venture of PSUs has undertaken the project to boost the e-mobility ecosystem in India. It plans to set-up around 10 plaza facilities, apart from erecting around 2,000 'single charger' based EV stations across the country during this fiscal.

Technically, a plaza has more than one charger of different type of power output to service different kinds of automobile models, whereas the 'single charger' can only charge one type of vehicle at any given time. Currently, it has installed over 300 such charging stations in India.

112 Electric vehicles' charging centres set up in Bengaluru

The tech-savvy Karnataka government has set up 112 charging stations in the city for electric vehicles (EV) and to encourage citizens switch over from fuel-based cars. Of the 112 stations, 12 are DC (direct current) fast charging points and 100 are AC (alternate current) points for EVs, including scooters, autos and cars.

Tariff for AC slow charging is Rs 7.30 per unit, Rs 7.42 per unit for DC charging and Rs 7.99 per unit for fast charging.

BYPL-EV Motors partnership installs EV charging station in Delhi with two types of chargers

BSES Yamuna Power Limited (BYPL) and EV Motors India Pvt Ltd (EVM) partnership had made an agreement in early 2020 to set up electric

vehicle charging stations in Delhi. The first of these has been installed and inaugurated at Patparganj in East Delhi. The charging station carries the brand 'PlugNgo' and boasts a Central Management System (CMS). It is expected to cater to 15 to 18 cars per day.

The station has two types of chargers – DC 50 kW with three guns (CCS2 + CHAdeMO + Type 2 AC) for cars like Hyundai Kona, MG ZS EV and Tata Nexon, and a DC 30 kW with 2 Guns (Both GB/T) for cars like Mahindra e-Verito and Tata Tigor. Two electric vehicles can be charged simultaneously from each charger.

162 new charging stations for electric vehicles in Noida soon

Over 160 charging stations for electric vehicles (EV) are set to come up in Noida soon, with the Noida Authority and the Energy Efficiency Services Limited (EESL) signing an agreement for it. This agreement builds upon a memorandum of understanding (MoU) signed between the EESL and the Noida Authority last year, which led to the installation of 20 EV chargers in the city.

According to the agreement, the EESL will make an upfront investment on services pertaining to the agreement along with the operation and maintenance of public charging infrastructure by qualified manpower, while the Noida Authority will be responsible for the provision of space for the work.

Kerala State Electricity Board shortlists 8 agencies for setting up EV charging stations

Kerala State Electricity Board has shortlisted over half a dozen companies/consortiums eligible for setting up electric vehicle charging stations in select locations in the state. The empanelled bidders are: Bridge Way Motors LLP, Kozhikode and EXICOM Pvt Ltd Gurgaon (consortium), Okaya Power Pvt Ltd, New Delhi, Indus Motor company pvt ltd, Calicut and Delta Electronics India Pvt Ltd, Chennai (Consortium), Trinity Clean tech pvt Ltd, Telangana, Energy Efficiency Services Ltd, New Delhi, Tirex Power company ltd, Ahmedabad, Tata Power Company Ltd, Mumbai and Neel Metal Products Ltd, New Delhi.

5. Partnerships and JVs

Zoomcar, ETO Motors partner to boost shared EV mobility

Self-drive car rental service provider Zoomcar has entered into an agreement with Hyderabad-based electric mobility solutions provider ETO Motors to provide an array of platform services for the latter's shared three-wheeler business.

Under the agreement, Zoomcar will provide its proprietary technology which emphasises on security and maintenance of vehicles, while ETO Motors will own and operate electric three-wheelers for shared first-mile and last-mile passenger commute, as well as goods movement within cities.

BattRE Electric collaborates with ZestMoney for EMI solutions

BattRE Electric Mobility, a technology-driven EV startup has sealed its partnership with ZestMoney for EMI finance scheme. This facility is valid for all the models of BattRE electric scooters like BattRE IOT, BattRE One, BattRE Lo:EV and BattRE Gps:ie.

EVI Technologies ties up with RevFin for EV financing

The EV charging infrastructure startup, EVI Technologies (EVIT) has partnered with digital lending start-up, RevFin alongside electric three-wheeler manufacturing companies, Saarthi and Mayuri for funding lithium-based electric vehicle and swappable batteries.

As part of the tie-up, EVI Technologies will provide swappable battery solutions and Revfin will help finance users to get EVs along with Swappable batteries. This partnership aims to have over 10,000 EVs on the roads in FY20-21. The initiative will majorly cover states like Delhi-NCR, UP, Chhattisgarh, Haryana.

Hero Electric partners with Autovert Tech for subscription-based financing plans

Hero Electric has partnered with fintech start-up Autovert Technologies for subscription-based financing plans for its electric two-wheelers. Under the partnership, Hero Electric customers can avail of all-inclusive subscription

plans starting at ₹2,999 per month along with bundled services such as comprehensive insurance, service and maintenance, loyalty bonuses and attractive upgrade options.

Hitachi-ABB Partners With Ashok Leyland To Launch Fleet EV Charging Systems In India

Hitachi ABB Power Grids has partnered with Ashok Leyland and plans to install its Grid-eMotion Fleet EV charging system in India. The full system offering includes charging hardware, control software and a comprehensive service agreement that supports operators with an efficient, flexible, easy-to-use and intelligent system, providing the highest lifecycle value at the lowest risk.

Ampere Electric partners with OTO Capital for vehicle leasing plans

Ampere Vehicles, a wholly-owned electric mobility subsidiary of Greaves Cotton Ltd, has partnered with OTO Capital to offer vehicle leasing plans for buyers. The leasing option will be available from August 1st, 2020 exclusively in Bangalore. However, the company is planning to extend the service to Pune, Hyderabad, Delhi, Chennai and Cochin by the end of this year. The partnership enables consumers to lease an electric two-wheeler within 48 hours by going through a documentation process.

The company claims that the cost of monthly payments will be significantly reduced for the owner through this plan. For example, an Ampere Zeal model that would cost Rs 3,020 using other financial means can now be availed at an OMI (Ownership Monthly Instalment) of Rs 2,220.

6. Investments

Table 6.1: Investments in July 2020

Date	Company name	Company type	Deal type	Investor(s)	Deal value (in INR Mn)	Total investor stake
July-2020	Bestway Agencies Pvt Ltd (BAPL)	Electric 3-wheeler company	M&A	Ampere Vehicles	70	74%
July-2020	Earth Energy EV	Electric Vehicles startup	Equity	LR Joshi, MD, Pranada Bio-Pharma and others	Undisclosed	
July-2020	Ather Energy	Electric Vehicles startup	Equity	Hero MotoCorp Ltd.	840	34.58%

Earth Energy EV raises seed funding: To launch three electric vehicles this year

Earth Energy EV, an electric vehicles startup, has raised an undisclosed amount of funding in its seed round. The round was led by LR Joshi, managing director of Pranada Bio-Pharma along with other private equity investors. Earth Energy EV will use the funds to facilitate the launch of its three vehicle models which it has been developing and perfecting with rigorous on-road trials over the last two-and-a-half years. Started in late 2017, this Mumbai-based startup has a production facility in the outskirts of the city and is involved in the development of electric motorcycles, scooters, commercial vehicles and autonomous vehicle drivetrains for global consumers. It is also involved in the development and manufacturing of EV smart chargers.

EV start-up Simple Energy plans to raise USD 1 million

Bengaluru-based electric vehicle start-up Simple Energy is in talks with angel investors to raise up to USD 1 million (about ₹7.5 crore). The proceeds will be utilised for testing and certification of its 280-km range scooter as the company seeks to secure Automotive Research Association of India's (ARAI) approval for its maiden offering by December, before the proposed launch in February-March next year.

Besides, Simple Energy is also working on a prototype of an e-motorcycle, which it plans to showcase in December along with the scooter model.

Okinawa aims expansion, plans to cross 500 dealerships in FY21

Electric two-wheeler manufacturer Okinawa has made aggressive dealership plans. The company is working towards the goal of reaching 500 dealerships target by the end of FY20-21. This a major shift in Okinawa's target as the company's previous target was a network of 350 dealerships. The electric two-wheeler manufacturer will also be targeting sub-dealers apart from primary dealers while expanding its footprints.

7. Other Interesting Reads

OPINION: India's Electric Vehicles ecosystem: Busting the myths

This article looks at six popular myths around charging of EVs. It is authored by Maxson Lewis, Managing Director, Magenta Power. This is the first of a series of opinion pieces that attempt to break down the myths for electric vehicles by laying out the truth on electric vehicles, specifically in the Indian context. This series called "Busting the Myth" is a joint editorial initiative of ETEnergyworld, The Climate Group and Climate Trends. The article covers myths around topics such as charging and charger technology, its cost, EV speed and range, etc.

Busting the Myth: Electric Vehicle Technology

This second article in "Busting the Myth" series is authored by JMK Research. There have been significant strides of innovation and techno-commercial development in technologies such as the electric powertrain (technology used to power EVs) and battery in the recent years, which are sure to disqualify some of the age-old myths around EV technology. This piece provides a peek into the recent technology trends that are rapidly improving speed, range, battery life and safety of electric vehicles.

Hyundai Motor India extends warranty options for Kona EV customers

Hyundai Motor India has brought in new warranty options for customers of its electric vehicle Kona. Under the 'Wonder Warranty' initiative, customers can opt for either three-year unlimited option or four year/60,000 km or five year/50,000 km options. All the existing customers have an option to choose Wonder Warranty and get the benefits without paying any extra cost. However, the battery warranty for eight years /1,60,000 km remains applicable irrespective of the warranty option chosen.

Electric mobility post-COVID: EV sales growth to be driven by these four factors in India

This article by Nishchal Chaudhary, Founder & CEO, BattRE Electric Mobility, shines light on the Indian mobility ecosystem and the opportunities that it would bring in the times to come. It describes the local commute pattern of India, the implications of electric mobility and two-wheeler market, in particular, post-lockdown and also focuses on the factors influencing the sales growth of EVs.

8. Global Market Updates

Hyundai sells over 1 lakh Kona EV globally

South Korean car manufacturer, Hyundai Motor has sold more than 1 lakh units of the Kona Electric globally. As Hyundai claims, the cumulative sales of Kona Electric compact SUV was 103,719 units as of 30th June. The compact SUV has sold the number of vehicles since its launch in March 2018.

Hyundai also says that sales outside of its home market South Korea accounted for more than three-quarters of the total number. Hyundai launched the Kona electric compact SUV in India in 2019. It became the first fully-electric SUV in the Indian market.

Electric vehicle startup Rivian gets \$2.5B in added funding

Electric vehicle startup Rivian has raised another USD 2.5 billion in funding from accounts advised by investment firm T Rowe Price. The company has a contract with Amazon to build 100,000 electric delivery vans starting next year. Rivian also is rolling out a pickup truck and an SUV for sale to consumers next year.

Electric car subsidies make Renaults free in Germany

Car buyers in Europe can now purchase brand-new electric vehicle for less than the typical cost of a mobile-phone contract. Thanks to newly generous subsidies, some are even free. Shoppers have swarmed virtual showrooms in Germany and France, the region's two largest passenger-car markets, after their national governments boosted electric-vehicle incentives to stimulate demand. Their purchase subsidies are now among the most favorable in the world. The state support is allowing Autohaus Koenig, a dealership chain with more than 50 locations across Germany, to advertise a lease for the battery-powered Renault Zoe that is entirely covered by subsidies.

Europe's shift to electric cars picks up despite recession

Sales of battery-powered and hybrid cars have held up better than the overall European market amid a deeply painful recession, mainly thanks to the action of governments. The 27-country European Union is moving ahead with a major shift in transportation as part of the bloc's efforts

against climate change. Under regulatory pressure, carmakers are rolling out a slew of new electric models so that they can meet tougher limits on greenhouse gases that come into full force next year.

Battery-only models are becoming more affordable, especially as sales are supported by substantial government subsidies. As sales of internal combustion cars have fallen, demand for battery-only cars and hybrids that combine electric motors with conventional engines has been stable or even increased, recent statistics show.

New York to invest \$750 million to expand electric vehicle infrastructure

New York Governor Andrew Cuomo has announced an investment program that would allocate \$750 million to build charging stations and other electric-vehicle infrastructure as part of the state's long-term goal to reduce emissions. The measure is set to create more than 50,000 charging stations and will largely be funded by the state's investor-owned utility companies, with the total budget capped at \$701 million through 2025. New York's announcement comes on the heels of a similar measure by Florida, which had previously announced an \$8.6 million investment to expand charging stations.

Toyota touches 3-million hybrid sales in Europe

Toyota Spain delivered the three millionth hybrid electric vehicle (HEV) sold in Europe this month. Toyota Motor Europe (TME) started selling hybrid electric vehicles in 2000 with Prius, which has been expanded to 20 different HEV models across the Toyota and Lexus brands in Europe. In 2019, HEV accounted for 52% of the total sales volume, and 63% in West Europe.

Toyota has sold already more than 15 million full hybrid vehicles worldwide. In 1997, Toyota launched the Prius hybrid in Japan. The portfolio has been expanded to 44 models, which are sold in over 90 countries.



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