

EV

monthly updates

March 2021



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1. NEW PRODUCT LAUNCHES

Table 1.1: New Product Launches in March 2021

Product	Vehicle Type	Battery Specs	Other Specs	Price
Detel Easy Plus	2-wheeler	<ul style="list-style-type: none"> Range – 60 km Battery – 20 Ah 	<ul style="list-style-type: none"> Top speed – 25 km/h Motor – 250 W 	Rs. 41,999
Jaguar I-Pace	Car	<ul style="list-style-type: none"> Range – 470 km Charging time – <ul style="list-style-type: none"> DC 100 kW – 127 km in 15 min 11 kW 3-phase AC on-board charger – 53 km in 1 hr Battery – 90 kWh 	<ul style="list-style-type: none"> Top speed – 200 km/h Motor – 294 kW (Peak) 0-100 km/h – 4.8 secs 	Rs 1.05 – 1.12 crore (ex-showroom)

Source: JMK Research

Kia EV6 makes debut, claims to be faster than Porsche Taycan

After revealing the looks of its first fully electric SUV, Kia has now shared more details about the EV6 as it made its debut. It claims to be a long-range, distinctively styled crossover SUV with zero-emission, 800V ultra-fast charging and much more. Kia EV6 is the first dedicated BEV launched under the new Kia design philosophy 'Opposites United'. Kia claims EV6 will have up to 577 hp of power which will allow it sprint from zero to 100 kmph in just 3.5 seconds. It also has a top speed of 260 kmph.

Upcoming Launches

Audi To Launch Electric E-Tron Range In India In next 2-3 months

German luxury carmaker Audi will launch its fully electric sports utility vehicle e-tron and crossover e-tron Sportback in India in the next two to three months to kick off its EV journey in the country. The company, which had earlier planned to launch the e-tron towards the end of the last year, had to alter the plan in the wake of the coronavirus pandemic.

Globally, Audi had announced a five-year plan under which it would launch 30 electrified vehicles, which includes 20 pure EVs and 10 plug-in hybrid vehicles by 2025.

Volvo Cars to launch one electric car every year in India from October

Swedish luxury car maker Volvo Cars has said that it will launch one electric car every year in India, starting with the full electric SUV, XC40 Recharge, in October this year, with an eye on becoming a fully electric car company by 2030. The company said it intends to sell only fully electric cars and phase out any car, in the portfolio, with an internal combustion engine, including hybrids by 2030.

BattRE to launch new electric vehicles by June: Production capacity to be doubled

BattRE, a renowned two-wheeler electric company is looking to up its production capacity. The company which has earmarked land for its new factory in Jaipur, wants to double its production by June 2021. At present, the company's factory can churn out 1,000 bikes in a month. The dealer network at present stands at more than 120 showrooms whereas there have been around 100 charging stations that have been set up.

BMW unveils its 1st all-electric sedan i4, arriving this year

Leading German luxury car-maker BMW Group has unveiled its first all-electric sedan called i4 that will enter the global market this year. BMW has plans to showcase 25 electrified cars by 2025. The BMW i4 model line will be available in different versions covering ranges of up to 482 km. With a power output of up to 390kW/530HP, the BMW i4 can accelerate from zero to 100km/hour in around four seconds.

Mercedes to Unveil Flagship Electric Sedan With Tesla-Beating Battery

Mercedes-Benz is about to unveil a new flagship model it expects to boast market-leading battery range, following through on its pledge to compete in the luxury electric-vehicle segment with top technology.

The more than 700 kilometers (435 miles) of range Mercedes expects the EQS to achieve in lab testing is another indication Germany's carmakers will have something to say about Tesla Inc.'s early domination of the EV space. The company will flank the compact EQA and EQB with the larger EQS and EQE this year, and make SUV versions of the latter two models at its U.S. factory in Alabama.

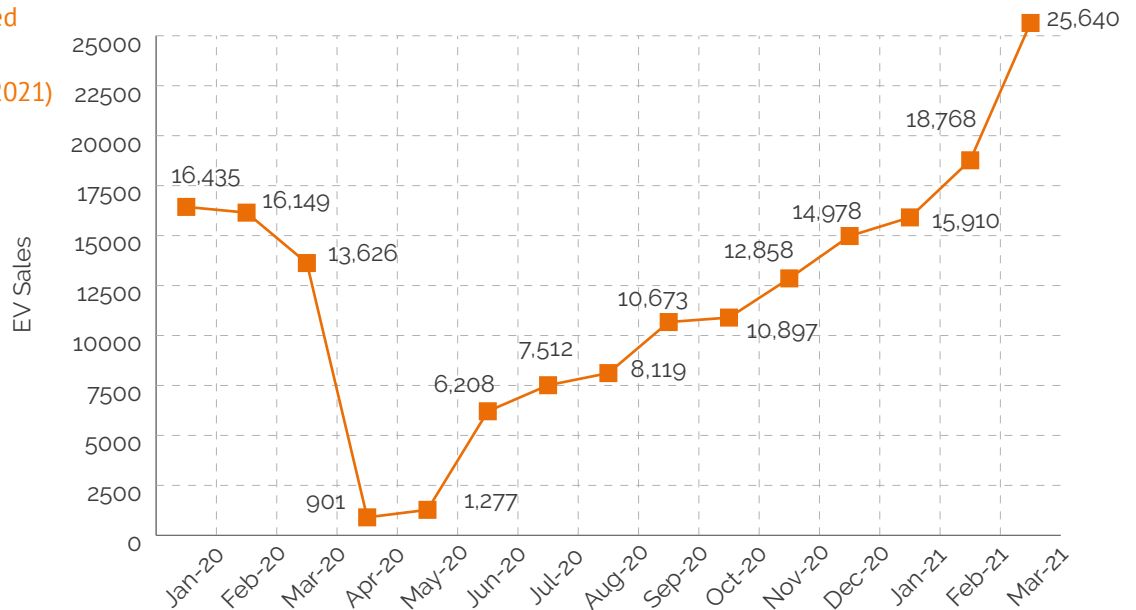
Polaris to launch its first electric vehicle

Motorcycle and all-terrain vehicle maker Polaris Inc has unveiled plans to launch its first electric vehicle, with an aim to advance the company's position in the electric vehicle market. Polaris said the full-size Ranger, which it is developing in partnership with Zero Motorcycles, will launch in late December. Deliveries of the vehicle will start in early 2022.

2. EV SALES TRENDS

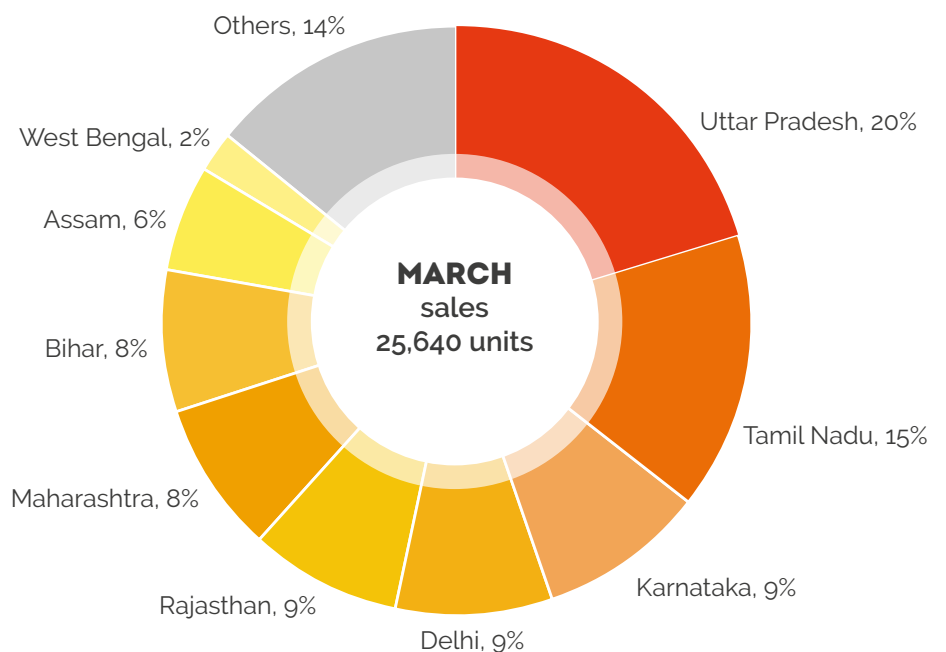
The registered EV sales in March 2021 has steeply grown to 25,640 units, registering m-o-m increase of 34.2% and y-o-y increase of 88.2%. The FY2021 sales of registered EVs is more than 1,34,000 units.

Fig 2.1: Registered EV sales in India (Jan 2020 – Mar 2021)



Source: Vahan Dashboard, JMK Research
 Note: Sales figure represent EVs registered across 1277 RTOs in 33 states/ UTs.

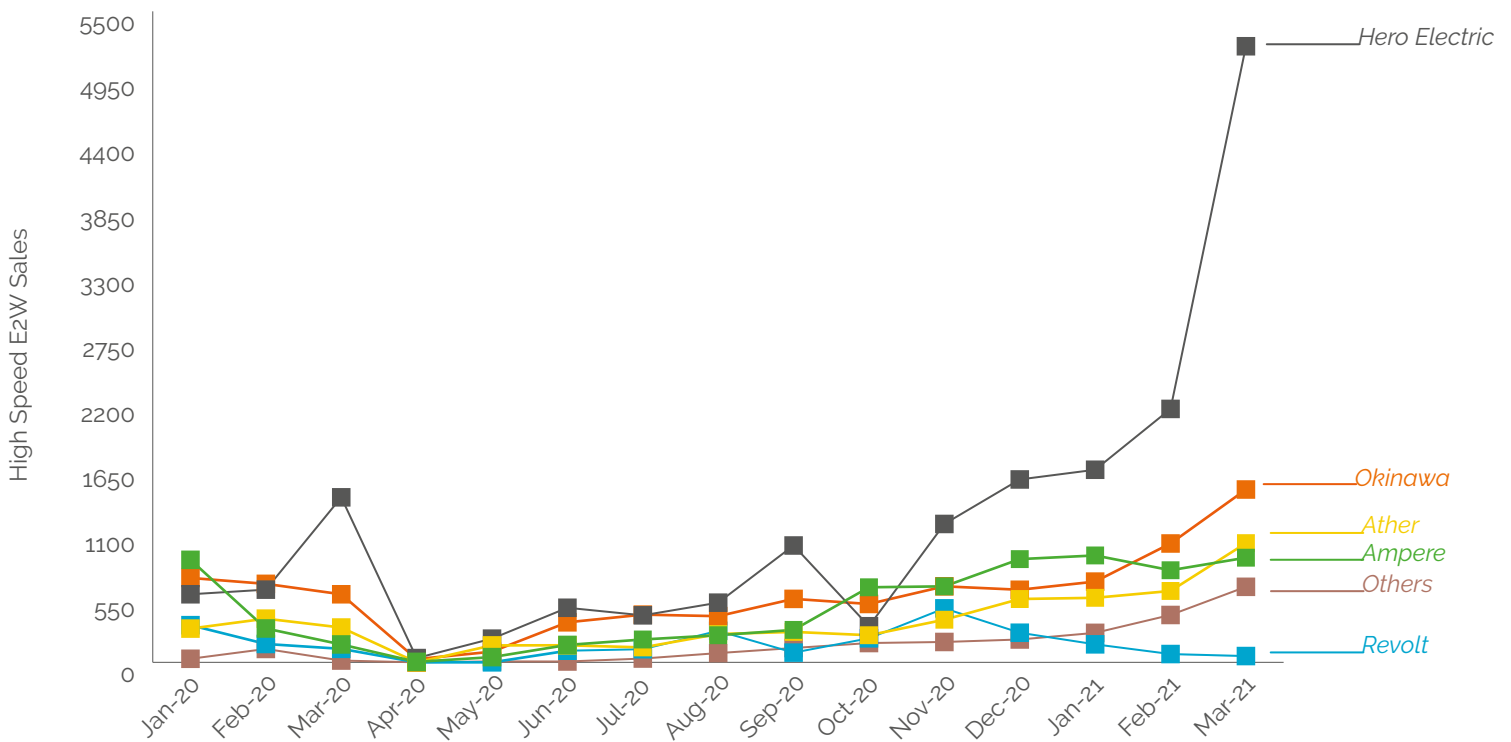
Fig 2.2: (State/ UT) Region wise registered EV sales March 2021



High-Speed Electric Two Wheeler (E2W)

The cumulative sales of Ampere, Ather, Hero Electric, Okinawa and Revolt in March 2021 for the HS-E2W category is 8600+ units, gaining 87% m-o-m growth. The overall rise of sales in this segment for the month can be majorly attributed to Hero Electric, Ather and Pure EV.

Fig 2.3: Player-wise high-speed E2W sales trend



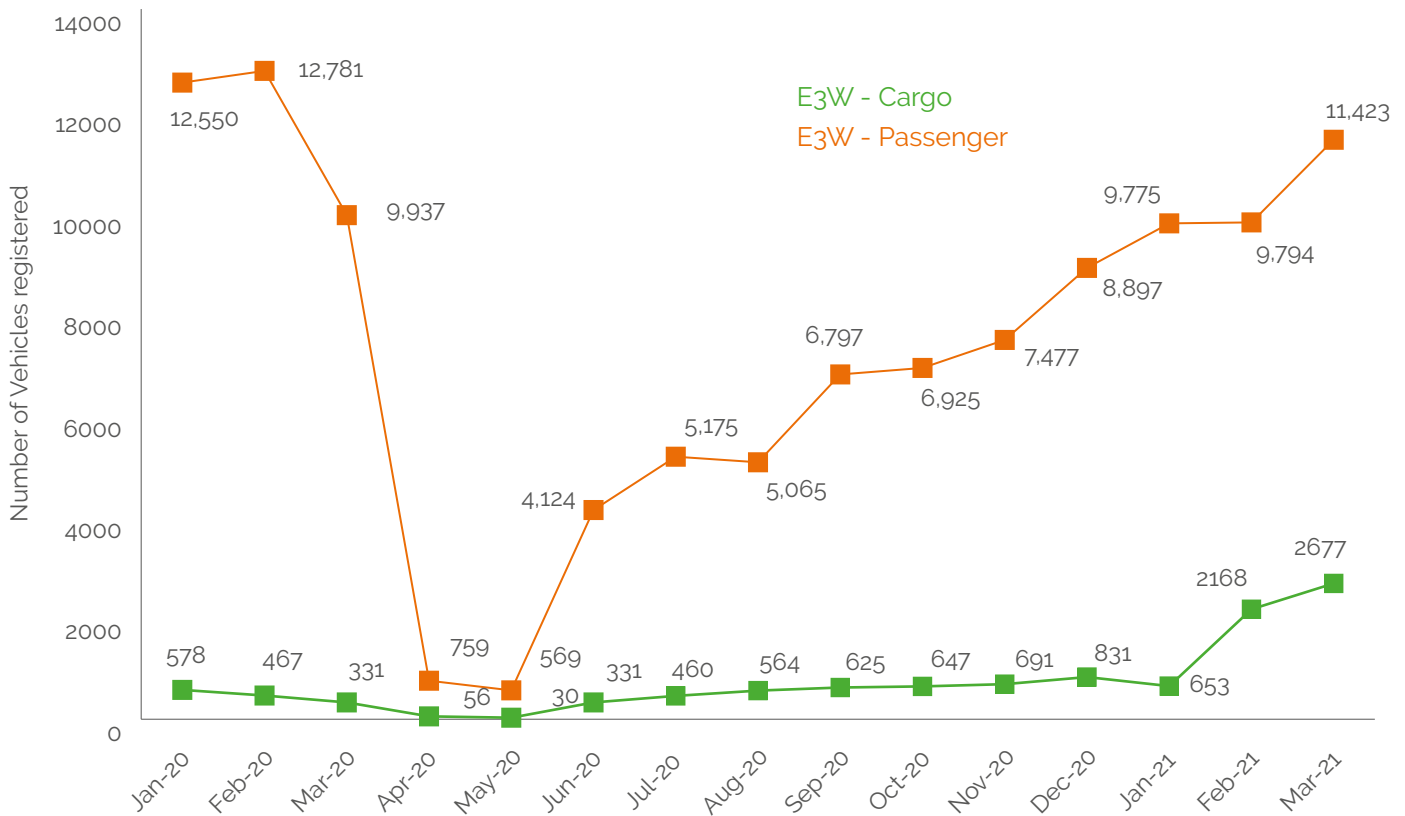
Source: Vahan Dashboard, JMK Research

Note: Sales figure are for only high range E2W models with speed higher than 25kmph. Sales figure represent E2Ws registered across 1277 RTOs in 33 states/ UTs.

Electric Three Wheelers (E3W)

The sales of registered E3Ws (both passenger and cargo-type) in Mar-2021 is 14,100 units, rising 17.9% over Feb-2021 sales. The share of cargo-type E3W in the combined E3W sales for Mar-2021 has grown m-o-m to hold 19% share. The total registered E3W sales during FY2021 is 86,000+ units.

Fig 2.4: Sales trend of cargo E3W and passenger E3W



Source: Vahan Dashboard, JMK Research

Note: Sales figure represent E3Ws registered across 1277 RTOs in 33 states/ UTs.

3. POLICIES AND REGULATIONS

Draft Karnataka Renewable Energy Policy 2021-2026

The Karnataka Renewable Energy Development Limited (KREDL) has issued the 'Draft Karnataka Renewable Energy Policy 2021-2026' aimed at developing 20 GW of renewable energy projects with and without energy storage systems in the state. As part of its objectives, the policy intends to promote use of RE for charging the electric vehicles and battery swapping stations with the aim of greening the transportation sector.

In line with this, the support provisions include:

1. The charging station/battery swapping station service providers may set up RE generation plants within their premises for captive use and may also draw renewable power through open access subject to fulfilment of requirements under open access regulations.
2. Rooftop Solar PV Power Plants within same premise can be used for supplying the power to the EV Charging stations/battery swapping stations. For such charging stations, a rebate on the applicable tariff may be evaluated with the consent of KERC.
3. RE for charging the EV's/battery swapping stations can be with or without energy storage.
4. Government land/space on short term lease (with option of renewal) will be allotted for the first 100 renewable energy based EV charging stations and battery swapping station under this policy. The guideline for allocation of land/space will be notified by the Government of Karnataka.

Delhi govt aims to convert its entire transport system to electric: Manish Sisodia

Delhi deputy chief minister Manish Sisodia announced that the government aims to convert its entire transport fleet to an electric vehicle system in the national capital in the next 25 years. The government is soon going to increase the number of charging stations for electric vehicles from 72 to 500. Rapid charging points are also being built along the lines of the city of London.

Andhra Pradesh govt to buy 1 lakh electric two-wheelers for staff

The Andhra Pradesh government will help its employees buy more than 100,000 electric two-wheelers by arranging for domestic as well as global financing at attractive rates. Touted by the state government as a world first, buying electric two-wheelers in such large quantities will translate to Rs 500-Rs 1,000 crore worth sales for manufacturers.

4. CHARGING INFRASTRUCTURE

Vehicle charging station must for new one kanal, above houses

The Chandigarh UT administration is planning to make electric vehicle charging stations mandatory for new houses with an area of one kanal and above in the city. The administration is in the process of framing guidelines for installing the stations. It has already started receiving requests and proposals from public sector undertakings (PSUs) for setting up electric vehicle charging stations.

Reserve 5 pc parking space for EV charging points: Delhi Govt to buildings like malls, hotels

Delhi Power Minister Satyendar Jain has directed all buildings in the city such as malls, hospitals, hotels and those housing offices that have parking facilities with a capacity of more than 100 vehicles to reserve five per cent of that space for electric vehicles (EVs) and charging points. With this, the city can have more than 10,000 charging points for EVs by December, a government official said.

Ahead of I-Pace launch, JLR India sets up charging infra at retail outlets

Jaguar Land Rover India has set up charging infrastructure across 22 retail outlets across 19 cities, which are now EV ready in terms of infrastructure, as well as sales and after-sales support. The charging infrastructure has been set up in metro cities and key urban hubs across the country.

Currently, over 35 EV chargers have been installed at retailer facilities across the country and more are underway. Besides, the I-Pace customers would be able to charge their vehicles using Tata Power's 200 plus charging stations across the country, the automaker said.

Oye! Rickshaw launches battery swapping platform, aims to deploy 10,000 lithium-ion batteries

Electric mobility startup Oye! Rickshaw has announced the launch of its battery swapping platform targeting to deploy 10,000 lithium-ion batteries by the end of this year. The company, which started a battery swapping pilot project in December 2020, said it has crossed one lakh swap kilometres in under three months.

First-ever streetlamp electric vehicle charger launched: Magenta to install 1000 units in 2021

Hindustan Petroleum Corporation Limited and Magenta has opened a new ChargeGrid Flare EV charger for operations at two locations – HPCL Bandra Kurla Complex outlet in Mumbai and Nitimarg T&E outlet in Delhi. ChargeGrid Flare is a street lamp integrated charger. This class of EV charging points is a first in India.

The charger is built inclusive of power-saving efficient LED lamp, a street light pole and Electric Vehicle Supply Equipment made for Indian climatic conditions enabling online and remote monitoring of the chargers. The charger also has an automated payment gateway through the ChargeGrid App, thereby eliminating the need of having a station marshal to monitor, maintain and operate the chargers at the location.

5. PARTNERSHIPS & JVS

Zypp to provide last-mile delivery services for e-grocery, foodtech players

Gurugram-based Zypp Electric Mobility has partnered with more than 20 grocery, e-retail and foodtech players, including BigBasket, Grofers, Modern Bazaar and Spencers, to offer last-mile delivery services. The electric self-drive scooter services provider, formerly known as MobyCy, has also deployed over 1,000 trained professionals to cater to the needs of the segment.

RevFin partners LoadExx to launch aggregation platform for cargo EVs

Digital lending platform RevFin has entered into a strategic partnership with on-demand logistics platform, LoadExx, to launch an aggregation platform exclusively for commercial cargo vehicles. The partnership plans to put 4,000 vehicles on the roads by March 2022.

Sun Mobility, Zyngo partner to offer last-mile delivery

Electric vehicle (EV) mobility solutions provider Sun Mobility has partnered with Zyngo, a hyperlocal company aimed at last-mile and middle-mile delivery sector to solve last-mile connectivity issues. The partnership has already witnessed 120 vehicles deployed across 4 cities of Gurugram, Delhi, Noida and Ghaziabad, and aims to expand to 500 vehicles by end of 2021.

Rapido partners with Zypp to launch electric bike taxi ride service in India

Bike Taxi service Rapido had announced a partnership with Zypp Electric to launch a new electric bike taxi service in India. The newly launched service is called Rapido EV. It will be available in Delhi and the National Capital Region starting March 2021 as a part of the three-month-long pilot run.

Tata Power-DDL, SUN Mobility partner to set up EV battery 'Swap Points' in Delhi-NCR

Tata Power-DDL – a power distribution utility serving seven million people in Delhi has said it is partnering with Bengaluru-based EV infrastructure startup SUN Mobility to set up a network of battery 'Swap Points' across North and Northwest Delhi. The companies launched the first 'Swap Point' with two Quick Interchange Stations to serve the growing demand for EVs in the Azadpur area – one of the busiest marketplaces of Delhi.

Indian Oil Corporation enters into joint venture with Israeli firm Phinergy

Indian Oil Corporation (IOC) entered into a collaboration with Phinergy, an Israeli start-up company specialising in hybrid lithium-ion and aluminium-air/zinc-air battery systems, to form IOC Phinergy Private Limited.

The joint venture will manufacture Aluminium-Air systems in India to boost India's flagship programme - "Make in India" and recycle used Aluminium to strengthen India's energy security.

Get My Parking acquires EV startup Mobilytics for future of mobility

Technology-based parking management platform Get My Parking has acquired Mobilytics, a Delhi NCR-based startup that enables battery-as-a-service application for parking lots and electric vehicle ecosystem.

Mobilytics's Platform-as-a-Service application designed for electric vehicle operators helps OEMs to improve battery performance and reliability. Based in Delhi NCR, the startup has been supplying technology to electric two-wheeler and three-wheeler OEMs which have done 200k+km on the platform.

6. INVESTMENTS

Table 6.1: Investments in March 2021

Company name	Company type	Deal type	Investor(s)	Deal value (in US\$ Mn)	Details
Euler Motors	EV OEM	Equity	<ul style="list-style-type: none"> Inventus India Jetty Ventures Sujeet Kumar Srinivas Anumolu K Ganesh 	4	Euler Motors raises additional Rs 30 Cr as part of ongoing series-A round
Euler Motors	EV OEM	Equity	<ul style="list-style-type: none"> ADB Ventures Blume Ventures 	2.6	Euler Motors raises additional USD 2.6 million in Series A round
BLive	EV experience platform	Mix of Debt & Equity	<ul style="list-style-type: none"> Lets Venture Mumbai Angels JITO CreditWise DNA entertainment 	1	EV experience platform Blive raises \$1 M in pre-Series A round

Source: JMK Research

Detel plans to raise Rs 150 crore by end-2021

Electric vehicle startup Detel is targeting to raise Rs 150 crore by the end of this year. It had unveiled the advanced model of its two-wheeler Detel Easy—Detel EV Plus—catering to the needs of B2C segment, and Detel Easy Loader for B2B customers at the recent India Auto Show.

Detel was started in 2017, as an electronics goods & consumer gadgets start-up. In January 2020, the company entered the EV industry.

7. OTHER INTERESTING READS

Piaggio, KTM, Honda, & others join hands for EVs' swappable batteries consortium

Piaggio Group had signed a letter of intent with KTM AG, Honda Motor, and Yamaha Motor, in order to set up a 'Swappable Batteries Consortium' for motorcycles and light electric vehicles. The consortium will define standardised technical specifications of swappable batteries for vehicles in the L-category -- mopeds, motorcycles, tricycles and quadricycles.

Log 9 develops rapid charging battery packs for EVs; pilot runs under way

Bengaluru-headquartered deep-tech startup Log 9 Materials has launched rapid charging battery packs for electric vehicles. Log 9's team has used supercapacitor technology and Graphene to develop this battery which is said to give a range of more than 70km for electric two-wheelers and 60-80 km for electric three-wheelers. It takes only less than 15 minutes for the full charging of these batteries. The company claims that these battery packs offer up to 5x power, resulting in increased load-bearing capacity and acceleration.

Israeli startup StoreDot's 5-minute battery charge aims to fire up electric cars

From flat battery to full charge in just five minutes -- an Israeli start-up has developed technology it says could eliminate the "range anxiety" associated with electric cars. Ultra-fast recharge specialists StoreDot have developed a first-generation lithium-ion battery that can rival the filling time of a standard car at the pump.

Hundreds of prototypes are being tested by manufacturers. His company, based in Herzliya, near Tel Aviv, is backed by four key investors: German automobile manufacturer Daimler, the UK's British Petroleum and the electronic giants Samsung and TDK.

EV financing industry to be worth Rs3.7 lakh crore by 2030: Niti Ayog report

NITI Aayog and Rocky Mountain Institute (RMI) India released a new report called 'Mobilising Electric Vehicle Financing in India'. The new report highlights the role of finance in India's transition to electric vehicles (EVs) and analyses that the transition will require a total capital investment of USD266 billion (INR 19.7 lakh crore) in EVs, charging infrastructure, and batteries over the next decade.

The report also claims that the electric vehicle financing industry will use a market size of USD 50 billion (INR 3.7 lakh crore) by 2030, which amounts to about 80% of the current size of India's retail vehicle finance industry, worth USD 60 billion (INR 4.5 lakh crore) today.

Triton Electric registers unit in India

US-based Triton Electric Vehicle LLC has registered a subsidiary in India as part of setting up a business in the country. New Jersey-headquartered Triton Electric Vehicle LLC has registered the unit by the name of Triton Electric Vehicles India Pvt Ltd. The newly formed entity will work towards building the country as one of the biggest markets for Triton EV outside the US.

Bharat Forge to undertake EV biz through wholly-owned unit

Auto components firm Bharat Forge intends to undertake electric vehicle (EV) business through a special purpose vehicle, which would be a wholly-owned subsidiary of the company. As an initial step, the company has decided to acquire newly formed group firm Kalyani Powertrain Pvt Ltd (KPPL).

Varroc to produce EV chargers for Canada-based Delta-Q

Auto component maker Varroc Engineering has entered into a contract manufacturing agreement with Vancouver-based Delta-Q Technologies Corp. As per a co-operation agreement inked between the two entities, Varroc would manufacture Delta-Q's chargers in India to support the expansion of the electric two and three-wheeler market.

Ola's 500-acre e-scooter factory in Bengaluru to make EV every 2 seconds

Ola Electric Mobility Pvt hopes to make 10 million vehicles annually or 15% of the world's e-scooters by the summer of 2022, starting with sales abroad later this year. A two-and-a-half hour drive southeast of Bangalore, Ola founder – Bhavish Aggarwal's envisioned \$330 million mega-factory marks a bold foray into uncharted territory for an entrepreneur who's spent 10 years building a ride-hailing giant.

Delhi Cabinet gives green signal for 300 electric buses

The Delhi Cabinet has approved a proposal for the engagement of 300 Low-Floor Fully Electric AC buses by the Delhi Transport Corporation (DTC) under the Centre's 'Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India [FAME] Phase-II' Scheme. The engagement of electric buses in the DTC fleet on the OPEX Model is a major policy shift as regards the operation of buses by the DTC. So far, the DTC has been operating only buses owned by it. Electric buses are being inducted into the DTC for the first time.

The lowest bidder is M/s. JBM, which has quoted ₹68.58 per km. The second-lowest bidder, M/s. Tata Motors, has agreed to match the rate quoted by M/s. JBM. Under the tender conditions, M/s. JBM shall operate 200 buses, while 100 buses shall be operated by M/s. Tata Motors

8. GLOBAL MARKET UPDATES

US to install over half million charging stations to push electric vehicles

National Climate Advisor Gina McCarthy alongside senior staff from the National Economic Council, the Council on Environmental Quality, and Department of Transportation, held a virtual meeting with CEOs from EV charging infrastructure companies to discuss shared priorities from tackling the climate crisis to supporting the economic recovery to build back better.

During the meeting, McCarthy underscored President Joe Biden's commitment to investments that will strengthen domestic supply chains, bolster American manufacturing, create good-paying, union jobs in sectors that support vehicle electrification, and she noted the administration's goal to build more than 500,000 EV charging stations.

Spain, SEAT, & Iberdrola Will Use EU Funds For EV Battery Factory

Spain plans to use funding from the European Union to create a public-private consortium with Volkswagen Group's SEAT, based in Spain, and the power company Iberdrola to build Spain's first EV battery factory.

Spain is due to receive €140 billion from the EU pandemic recovery funds. These funds are due by 2023 and around half are in grants. Spain hopes to use a large portion of these to finance major industrial projects that will help bring its economy back to life while also upgrading it.

Aston Martin To Make Electric Cars in U.K. from 2025

Aston Martin Lagonda Global Holdings Plc will build its new electric cars in the U.K. from 2025. Chairman Lawrence Stroll said its battery sports car and sport utility vehicle would be produced at plants in England and Wales respectively. Daimler AG's Mercedes-Benz may provide batteries to the firm. The firm's pledge to build cars in the U.K. comes at a time when the country is struggling to attract investment after Brexit.

Volkswagen plans six battery factories to ramp up electrics

Volkswagen plans six large battery factories in Europe by 2030 to power sales of more electric cars while driving down battery prices and making electric vehicles more affordable for entry-level buyers. The company would build on its existing battery production facilities at Salzgitter in

Germany and with partner Northvolt in Skelleftea, Sweden, adding new production technology and a standardized cell that it said would cut battery costs by as much as 50%.

BMW's Mini brand will go all-electric by the end of this decade

BMW AG's Mini brand will go all-electric from 2030 as the automaker intensifies its transition to battery-powered vehicles. The iconic British brand will roll out its last combustion-engine variant in 2025, and around half of all Mini sales should be electric by 2027.

VW's US\$14 billion Northvolt order is 'significant' for battery storage as well as electric vehicles

Northvolt said that it has been selected as strategic lead supplier to Volkswagen for premium battery cells in Europe with the massive new deal, which runs for 10 years. Northvolt is building out a gigafactory in Sweden, called Northvolt Ett, from which it plans to produce lithium-ion batteries with a low carbon footprint.

It had also been planning a large production facility (16GWh production capacity annually) in Saltzgitter, Germany, as a joint venture (JV) with VW. Northvolt said that its share of the JV has now been sold to VW, while VW's existing equity stake in the battery producer has been increased.

China's Geely to add \$5 billion battery plant in electric vehicle push

Geely said that it would build an electric vehicle battery factory with a planned annual manufacturing capacity of 42 gigawatt hours (GWh) in China's eastern city of Ganzhou, as it expands its EV line-up in the world's biggest car market. The total investment in the project by Geely's technology arm will be 30 billion yuan (\$4.61 billion).

China smartphone maker Xiaomi to invest \$10 bn in new EV unit over 10 years

Chinese smartphone maker Xiaomi Corp has formally entered the automotive industry with a new smart electric vehicle (EV) business. The firm will initially invest 10 billion yuan (\$1.52 billion) in the wholly-owned subsidiary, with a total investment goal of \$10 billion over the next ten years.

ABB, AWS to build EV fleet management platform

Swiss automation and technology company ABB has announced a collaboration with Amazon Web Services (AWS) to create a cloud-based EV fleet management platform for the real-time fleet management of EVs.

According to the companies, the platform will optimize the efficient use of EVs and speed up the electrification of transport fleets, helping operators worldwide maintain 100 percent business continuity as they transition to fully electric.

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JMK Research & Analytics

E: contact@jmkresearch.com

M: +91-7428306655

A: 27/2C, Palam Vihar,
Gurgaon, Haryana-India

W: www.jmkresearch.com

