

Issue 8 , August 2021

# kazam

Everything Electric

## Opportunities in the Electric Vehicle Industry

Kazam mini: World's  
Most Affordable  
Electric Vehicle  
Charging Station



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Parking and Charging

**Electric Scooter vs  
Petrol Scooter:  
Benefits for India**

The rate of petrol is  
increasing...

**Ola's New electric  
vehicle.**

The price for the new ola  
electric....

**Revised Maharashtra  
EV Policy 2021**

Maharashtra has come  
up...

# ALL ABOUT THE EV ECOSYSTEM

## What is an Electric Vehicle?

A vehicle driven by one or more electric motors or traction motor is known as an electric vehicle.

## WHY USE AN ELECTRIC SCOOTER?

- Higher riding experience
- Saving money opportunity
- No need to the gas station

## KAZAM EV

### Latest Updates

- Launched Kazam Mini
- The community is growing like crazy.
- Painting the Country Red with Kazam EV chargers all around.
- Invested in by Inflection Point Ventures, 1 USD Seed Round.
- In partnership discussions with leading EV fleets, OEMs, and businesses
- Installed more than 100 charging stations across India in less than six months.
- Chargers are all-electric vehicles and is available on every platform.
- India's first intelligent IoT-based charging station.
- Broad product portfolio to meet individual customer needs

### SAFEST, AFFORDABLE & RELIABLE EV CHARGER!



## Launch of six Tech innovation platforms - Atmanirbhar Bharat?

The Indian government, on the 3rd of July, launched 6 new technology innovation platforms to compete with the global market. Union Minister Prakash Javadekar stated that – "These platforms are the gift to the nation during the celebration of 'Azadi ka Amrut Mahotsav-Celebration of 75 Years of Independence' and will help in bringing all India's technical resources and the concerned Industry onto one platform to kick start and facilitate the identification of technology problems faced by Indian Industry and crowdsource solutions for the same." Further justified by saying this 6 platform will help India get closer to the aim of "Aatmanirbhar Bharat" and prepare for global competitors with the development of manufacturing technology indigenously through "Grand Challenges" on these Platforms.

### The platform developers

The platform was developed by the International Centre for Automotive Technology (iCAT), IIT Madras, Automotive Research Association of India (ARAI), BHEL, Central Manufacturing Technology Institute (CMTI), and HMT.

### Benefits from the platform

These platforms will benefit industries like OEMs, Tier 1, Tier 2 & Tier 3 companies, Raw Material Manufacturers, start-ups, domain experts, R&D institutions, professionals, and academia to provide technology solutions, suggestions, and opinions on issues involving manufacturing technologies.

It will benefit the research and development area with the exchange of knowledge. The platform has already witnessed over 39,000 registration who are students, experts, institutes, industries, and labs.





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# CAN I SET UP MY OWN EV CHARGING STATION?

The pandemic will end gradually and everyone will be able to get back on the road and the car and the bicycle will even be preferred after the end of the lockdown and restriction to respect social distancing. And since confinement has been beneficial for the planet, you might as well continue by investing in an electric car, right? And if it's the charging that slows you down, after reading this you will no longer be afraid of it and will even have a mad desire to invest in a zero-emission car.

## How to set up your own charging station?

First of all, if you are a tenant, you are going to need the approval of your landlord and you need to explain your part to them in detail. If the owner does not see any interest (in particular financial) in the installation of an electric charging station at home, the installation will be at your expense with his agreement. If you own your home, know that installing a charging station can increase the price of your property if you wish to resell it.

Secondly, you will have to take into account the direction in which you park your car as well as the length of the cable (generally 5 meters) in order to determine the most strategic location for your charging station. In addition, you will also have to take into account that the installation, if it is outdoors, is resistant to all types of weather.

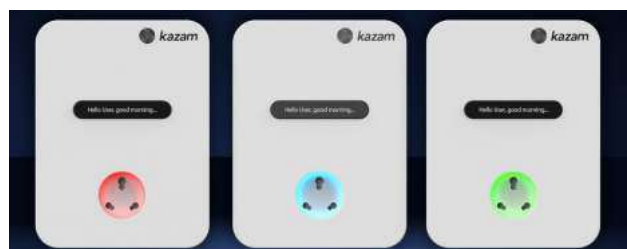
The connection to the electricity meter must also be made with all the safety devices necessary for the chosen means of recharging. If you have opted for a relatively powerful charging station, an increase in the power of your electrical installation may be considered. Discuss your needs with your electricity supplier.

Then you can proceed with the installation. To do this, you will first have to check that your electrical installation has an earth connection, otherwise, you will have to equip your electrical installation with it before the start of the work, because without this earth connection called earthing, the charging station cannot be installed. Contrary to what one might think, installing a charging station does not require major work or a major change in the layout of your home and your electrical installation. Nevertheless, you will have to call, whatever happens, a professional so that he establishes an electrical diagnosis before proceeding with the installation.

In terms of budget, you will need around Rs. 1 Lakh to Rs. 40 Lakhs for a well-equipped charging station in India. It depends on the type of chargers you want to install in your station. Note that you do not need any license for setting up any charging station and I think this is enough to motivate you to install an EV charging station.



Many subsidies and policies are running by the Indian and State government to promote E-mobility in India. In addition, professionals such as Kazam for example accompany you throughout your project by providing you with a tailor-made quote and helping you with all the procedures. They provide India's best IOT based charging station.



We hope we have persuaded you to continue with your project or to switch to electric vehicles. And, why not, as a final touch, choose a renewable electricity supplier with that you don't think?



# ELECTRIC SCOOTER VS PETROL SCOOTER: BENEFITS FOR INDIA

There is a lot of misinformation or myths about the benefits of electric vehicles around everywhere. But it is right to debunk many myths and demonstrate how electric scooters provide significant social and societal benefits in India.

## How is ESCOOTER Beneficial for India?

### Air Pollution

- An electric scooter is powered by an electric motor that draws power from a charged battery. It is devoid of a tailpipe. As a result, there are no local emissions. On the other hand, a petrol scooter emits a mixture of carbon dioxide, carbon monoxide, and particulate matter. The gasoline scooter is inferior for the air quality in our cities.
- An electric scooter is fantastic for improving the air quality in our cities. Many of you have known about electric vehicles' long tailpipes, and coal is a vital source of electricity generation in India. But you must all understand this. Independent scientific studies show that even if all electricity is generated from coal, EVs emit 50% less carbon dioxide due to the efficiency of the electric motor.
- India's renewable energy mix is already at 38% and will rise over the next decade. Your EV will become cleaner over time. Solar energy can now use to power your EV and achieve zero emissions.
- A petrol scooter does not have the option of being powered by solar energy. Petrol scooters are ultimately unsustainable. Every 17-year-old guy receives a gasoline scooter. Like millions of us, we are putting to our highways and cities, and they are modifying into gas chambers that cannot sustain.

### Noise Pollution

- There is a lot of noise coming from this petrol scooter. Just listen to the sounds we make when we start one of our petrol scooters. It's a disaster. You can listen to the wind and birds when you commence an electric scooter!
- As you can see, just one petrol scooter has made a lot of noise. And there are millions of them on our highways. There would have been less stress on the roads if all of these scooters were electric.

### Reduce the importing billions of oil litres

- A petrol scooter uses gasoline. Petrol and crude oil are importing from countries other than India. Over 6-7 years, a single petrol scooter consumes more than 2500 litres of oil, and there are millions of such scooters on the road. All this puts a strain on the Indian economy because we must import billions of litres of oil each year.
- On the other hand, an electric scooter is powered by a battery, which consumes electricity. India produces electricity. This scooter's electricity is made in India, and electricity production can scale up to greater levels. In other words, India has control over the fuel, and by not using petrol scooters, the country will avoid importing billions of litres of oil each year.

### Recycling Batteries: No produce of wastes

We're all aware that the batteries on these scooters are Lithium-ion. There is increasing concern regarding batteries and worry if, as we transition to electric cars, India will become reliant on imported lithium in the same way we rely on oil. The answer is NO, at least not on the same scale as oil. There is no need to visit a "Lithium Pump" every week to recharge our batteries! In addition, India has the infrastructure to recycle lithium batteries to manufacture lithium-based products and businesses to recycle the batteries.

### Advance technology

- It's also worth noting that several promising battery research initiatives are underway, such as Al-Air batteries and Sodium-Ion batteries. So battery technology is advancing, and your electric scooter will continue to evolve and improve.
- And, finally, are electric scooters manufactured in India? The big day isn't far away. Several companies like Mahindra Electric, Ather, Ola Electric, and the e-Rickshaw industry have already localised EVs to a large extent.

### Self-reliant technology

When it comes to manufacturing in India, the electric vehicle industry is well ahead of the pharmaceutical, solar, mobile phone, and consumer electronics industries which have traditionally been heavily reliant on China. China also provides engine transmission, alloys, plastics, and electronics for ICE scooters and motorbikes.

### Are you surprised yet?

Don't get taken in by misleading propaganda. EVs provide societal advantages to everybody.



# EV BATTERIES: RECYCLING OF RAW MATERIALS KEY TO SUSTAINABILITY

Electric car batteries consume less raw materials than combustion engines. This was revealed by a study by Transport & Environment (T&E) which places a further important step in support of more sustainable mobility from the point of view of climate change.

Global warming is a serious problem. Greenhouse gases generated by humans, especially carbon dioxide but not only, are a direct cause of the phenomenon, as amply demonstrated by the "hockey-stick" graph based on the reconstruction made by Mann, Bradley & Hughes in 1999. The causes are fairly distributed equally among all human activities. According to the IPCC (Intergovernmental Panel on Climate Change, a United Nations body), electricity production is responsible for a quarter of emissions, while another quarter comes from agriculture, livestock, and deforestation. Industry and civilian settlements generate another abundant quarter of greenhouse gases. 14% is attributable to transport, ships, planes, trucks, and cars, which alone are held responsible for 5/6%. These are global data as is the accumulation of CO2.



## Strategy towards electric mobility

The EU is the most virtuous region, given that it emits about 3 billion tons and above all, it has been in a declining trend since the beginning of the century, like the USA which, however, emits over 5 billion. China has exceeded 10 billion, more than three times the level of the beginning of the century. And if in America the largest share of emissions comes from transport, housing, and commercial activities, in China industry is the first contributor, given the still low level of motorization.

As a corollary, this leads to the hypothesis that their strategy towards electric mobility is not motivated by an environmental interest, but rather by the technological delay on combustion engines and the consequent need to counter region supremacy embarked on the path of limiting emissions for cars. The study by T&E, which is an NGO for sustainable mobility based in Brussels, which receives funding from the Commission itself and dozens of other organizations, does not however focus on emissions, but on the consumption of raw materials, revealing that "batteries electric cars need a much lower quantity of raw materials than cars powered by fossil fuels, taking into account the recycling process.



This is an important point of recycling. According to the study, "in 2035 more than a fifth of the lithium and 65% of the cobalt needed to produce a new battery could come from the recycling of old batteries." The conclusion of T&E is therefore that "the recycling rates required by a new legislative measure of the European Commission will drastically reduce the demand for virgin materials for electric vehicles, which is not likely for conventional cars".

## Wrapping up

The conclusion that the latest generation diesel is more sustainable than an electric is in a drawer, but it could pop up at any moment. Let's add that things on the market are not going quite as expected. First of all, motorists have discovered that with hybrid cars, preferably plug-in, they can satisfy environmental awareness without looking for a column and then remain attached to it for hours. Then came the pandemic, which reset priorities. With health at stake, people travel more by car, and some wonder if CO2 is still the priority or if it should not make room for other health emergencies. Here recycling becomes essential, to reassure both addiction and ethical and compassionate issues.





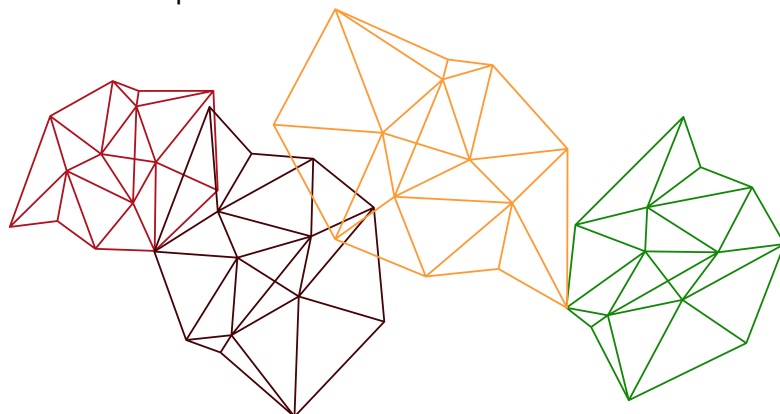
# JOB OPPORTUNITIES IN THE EV INDUSTRY

*Welcome to the EV Industry!*

## Types of Jobs in the Electric Vehicle Sector

- **Head accountant and Tender Manager:** You'll be determining the sales strategy for EV charging stations. Your key areas of focus will be creating and managing partnerships, supporting existing mobility sales.
- **Java Developer:** As a charging station developer, you'll need to focus and develop and expand a cloud-based application for the EV charging stations.
- **Scientific research:** As a part of the scientific research domain your work includes battery type/design, battery management system improvement, and recharging technology. The important part of the research and development team is to conduct research and testing on electric vehicle technology. The battery life and analysis performance of vehicles is done by chemists and material scientists examine.
- **Design & Development:** The work includes battery design, Electronic circuits, software, and application for consumers, durable and lightweight vehicle body. The design and development sector consists of everyone who helps from the initial vehicle modelling process to the final development process. Usually, engineers, software developers, industrial designers, technicians, and drafters work in this sector.
- **EV & chargers manufacturing:** Your work will include maintenance of machines & manufacturing plant, quality testing, human resource, & plastic moulding, etc. The manufacturing process requires a considerable fair share of the workforce & involves complex processes.
- **Infrastructure development:** You are required to design the infrastructure of charging stations, high power electric wiring, & renewable energy generation. The government will be planning to integrate both the private & public charging points for quick access to the charging systems. In difficult situations, there would be multiple charges away from your resident & workplace.

- **IT Solutions:** As a part of the IT Sector, you are required to shape the development and digitalization of the service and ultimately accelerate the growth of an organization. You'll be required to act as a bridge between business units, the consultancy service provider, and strategic business partners.
- **Accountant Manager:** You'll be accelerating the shift to electric mobility by selling out the EV charging station to individuals, public places, and other places of necessities.
- **Delivery & After-sales:** You'll be required to lead, build and motivate your team members, you'll be performing the implementation of the charging station and working in the capacity of the executive, and looking after the deliveries and after-sales services for the organization.
- **Sales and Business Development:** Under this head, you'll have to undertake the local sales & Business development and collaborate with associate peers to accelerate the business.



## Takeaway

Electric vehicles are an effective alternative for additional petrol-based vehicles. To improve the position of the EV industry, the government has brought various schemes under the Fame II policy that will add value to the sector.



# LEAD ACID BATTERIES

The lead-acid battery is one of the most common batteries. These batteries use sponge lead and lead peroxide for the conversion of chemical energy into electrical power. They are well-known to possess higher cell voltage at a cheaper cost. Lead-acid batteries are cost-cutting and commonly used in Electric Vehicles. Electric vehicles with lead-acid batteries can range up to 130 km (80 mi) per charge. There are 2 types of Lead Acid batteries: automobile engine starter batteries, and deep cycle batteries.

## Lead-Acid Battery Parts

- **Container:** The containers in a lead-acid battery are made out of glass, wood, ebonite, bituminous compound, ceramic materials, and moulded plastics. The container stores and resists the chemical inside the battery.
- **Plates:** They are the formed plates, plate plates, pasted plates etc. Plates shape a grid, which is necessary to make an electric current and for distributing the current equally.
- **Active material:** The material which is a part of a chemical reaction is active material. And lead-acid batteries contain:
  - a. Lead peroxide ( $PbO_2$ )
  - b. Sponge lead
  - c. Dilute Sulfuric Acid ( $H_2SO_4$ )
- **Separators:** Separators are built of leadwood, porous rubbers, and mats of glass fibre. They are thin shell-like structures.
- **Battery Terminals:** Like every battery lead, an acid battery has 2 terminals, the positive terminal, and the negative terminal. The positive terminal has a diameter of 17.5 mm, and the negative terminal has a diameter of 16 mm.

## Nature of Lead-Acid Battery

- **Battery capacity & depth of discharge:** Deep-cycle & shallow-cycle batteries
- **The lifetime of Battery:** The battery capacity decreases as time passes. There is suffocation and shedding of active materials, which leads to a decrease in the battery capacity.
- **Battery maintenance:** The crucial point in maintaining a lead-acid battery is replacing the water regularly, as the production and escape of hydrogen and oxygen cause water deduction in the batteries.
- **The efficiency of battery:** The lead-acid battery has up to 85% of coulombic efficiencies and up to 70% of energy efficiencies.

**Stay Tuned for Comparison of Lithium-ion v/s lead-acid battery electric vehicle (next month issue)**



# HOW CAN RURAL TOWNS PREPARE FOR EVCS?

It is, perhaps, the effect of the tree that hides the forest. When it comes to electric vehicles, we often think first of a mobility solution in an urban environment, where the distances are small enough not to have to worry too much about finding a free charging station. The electric car, whose sales reached 236,802 units in India this last year is yet to find its place on the outskirts of large cities as well as in predominantly rural areas.

Electric vehicles are the future of cars. India focuses on electric vehicles and includes all types of vehicles: motorcycles, tricycles, and quadricycles in the EV revolution. Among them, about 70% of electric vehicles in India are motorcycles. Many rural areas of India have solar power generation infrastructure, and costly infrastructure is required to utilize the energy generated during the day. If national policymakers are concerned about local infrastructure, they may want to devise policies for local consumers to increase the use of electric vehicles in rural areas as well.

## Why install EV charging stations in rural areas?

The use of EVs reduces the load on the grid, generates more energy for resources, generates green energy, reduces the environmental impact of burning fossil fuels, and makes local consumers self-sufficient.

## Electromobility is still being held back by doubts & Acceptance is the greatest challenge

In the renewable energy system that we are heading towards, traffic is becoming more and more electrified. In rural areas, in particular, it becomes clear why the energy and transport transition belong together. Because the fuel for the electric cars comes directly from the barn or the field. This is a huge opportunity that is often lost in the discourse. If one takes a look at the discussions in science, research, and politics, one often speaks of "structurally weak", "shrinking" and "disadvantaged" rural regions. Rural areas are by no means homogeneous residual categories that can only be described with the help of negative definitions. Temporal change processes, pronounced regional individualities, population structures, & settlement structures show the diversity of rural areas. And so the requirements for future mobility will also differ. Electric vehicle charging stations in rural areas give a boost to the EV industry & will help in the development of rural areas of India.





## ALL ABOUT 2021 EV EXPO

EV Exhibition 2021 is the Eleventh Electric Vehicles Exhibition in India and will be held in Delhi, giving far-reaching market experiences, incredible business openings and a stage for systems administration.

EV Exhibition brings to the electric vehicle industry the chance to grandstand, see and comprehend the most recent in electric vehicles, segments and administrations for advantageous and harmless to the ecosystem transportation of travellers and products. The exhibition guarantees that the right public and worldwide players grandstand their innovation and items to the right crowd, proprietors and administrators, makers and dealers.

The quantity of new dispatches in electric 2 and 3 wheeled vehicles just as battery and charging arrangements and so on demonstrates the need for a stage like EV Exhibition at this crossroads to give a genuinely necessary stage to EV producers to uncover and feature their developments. Opportunity can be given and advancement during the most recent year and a half, Rajiv Arora, Coordinator, EV Exhibition 2021, said.

### A portion of the EV dispatches that occurred on the principal day of the Eleventh EV Exhibition 2021:

- Dispatch of e-bicycles - 'Helios' and 'Aiolos' by Supreme Smart Power Pvt Ltd. With restricted journey control, switch stuff and salvage highlight.
- Japanese organization Land Engines dispatched the L5 e-auto with contact LCD board, swing arm suspension and 6 seats. Likewise, an e-cart commercial with Drove show at the back was additionally dispatched, which will give an extra kind of revenue to the drivers.
- EVTRIC Engines Pvt Ltd. has dispatched 2 e-bikes and 1 food conveyance e-bicycle. The e-bike gets 12" tires with a ground leeway of 190 mm. Vehicles go around 75Km on a solitary charge.
- Delhi-based Remotos Electric Bikes disclosed the rapid e-bicycle and e-bike.
- Dispatch of Mover-Passenfer E-Cart and Hauler+ - loader E-Cart by E-Phil Electric with 100% Indian parts. The most recent EV charging stations were likewise disclosed.
- Altius Auto Arrangements dispatched a fast electric bicycle with a scope of 120 km for every charge, at a reasonable cost of Rs. 45000/- (after government endowment).
- Soni e-Vehicles dispatched an e-food truck with

LPG chamber, hot plate and abundant stockpiling cupboard, space for menu show and so forth.

- Supreme smart Power Pvt Ltd. dispatches a wide scope of reasonable versatility answers for business and traveller applications.
- Matter Energy dispatches savvy secluded battery arrangements in the voltage scope of 12V to 72V with limits from 6 Ah to 200 Ah.
- The most recent savvy e-vehicle charging arrangements and batteries were additionally divulged at the exhibition.

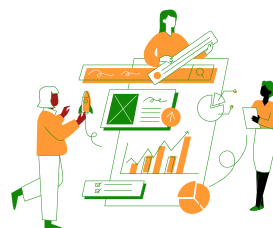
EV Exhibition 2021 is upheld by the Ministry of Road Transport and Highway, Govt. of India, Micro Small and Medium Enterprises (MSME), and ICAT (International Centre for Automotive Technology).

Around 80 Indian and Worldwide exhibitors will grandstand their innovatively progressed, contamination-free 2,3, and 4 wheeled e-vehicles like e-cart, e-truck, e-bicycle, e-bike, e-cycle, e-loader are performed. Just as 4 wheeled vehicles at EV-Exhibition 2021. The most recent lithium-particle batteries, charging arrangements, vehicle segments and extras are likewise in plain view at the exhibition.



### Need More Help?

EV Exhibition is the lone exhibition in India committed to the Electric Vehicle Industry. "End mile network" and "eco-accommodating" are the keys to the electric vehicle industry. To advance traveller accommodation and contamination-free climate, the Service of Street Transport and Thruways has given rules for endorsement of e-carts and e-trucks, which will give a lift to the electric vehicle industry. The business should develop complex in a couple of years.



# REVISED MAHARASHTRA EV POLICY 2021

Electric vehicles are the key to electric mobility and sustainability, which leads to a better environment. State EV policy was announced back in 2018 (one of the 1st states to launch EV Policy), which was revised on the 13th of July 2021 and will be applicable till 31st of March 2025. The government of Maharashtra will look towards the review and extension of the policy. The policy amount announced was Rs 930 crore.

## About Maharashtra EV Policy 2021

The revised Maharashtra EV Policy 2021 aims to strengthen demand and supply chain. The policy also focuses on increasing the battery electric vehicles in the state.

The Maharashtra EV Policy 2021 current vision supporting as-well-as adopt sustainable growth and clean energies in the state. Maharashtra aims to maintain the lead in automobile manufacturing in India and to upgrow its Electric vehicle sector.

## Plans covered in Maharashtra EV Policy 2021

### Subsidiary for electric four-wheelers

The incentive for an electric four-wheeler, be it an electric car or SUV Rs 5000 per kWh of battery capacity. And electric vehicles with a battery capacity of up to 30kWh can reach up to Rs 1.5 lakh. The policy has additional incentives of up to 1lakh for an electric car or SUV buyer willing to buy by the 31st of December 2021. Maharashtra government is looking forward to subsidizing 10,000 electric cars and SUVs by 2025.

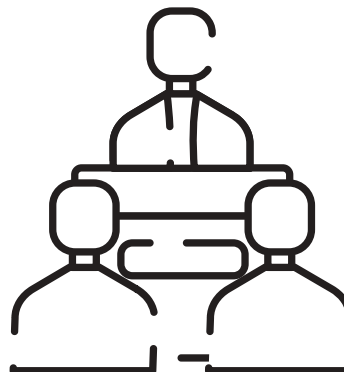
### Subsidiary for Electric two-wheeler

The Maharashtra EV policy will be subsidizing the first 100,000 electric two-wheelers. The incentives are Rs 5000 per kWh of battery capacity. A buyer willing to buy a two-wheeler with a battery capacity of 3kWh, by 31st of December 2021 will get an additional incentive of 15,000.

### Charging infrastructure incentives

Infrastructure can be the key to the rise of electric vehicles and lead the state to electric mobility. By the end of 2025 Maharashtra government aims to set up around 2500 charging stations in seven urban agglomerates. Mumbai is going to be the dominating region among these, with 1500 charging stations. Secondly, Pune with 500 charging stations, Nashik with 150 charging stations, Nagpur with 150

charging stations, Aurangabad with 75 charging stations, Amravati with 30 charging stations, and Solapur with 20 charging stations. Incentive over the charging station is Rs 10,000 on the early 15,000 slow chargers and Rs 5Lakh over early 500 fast chargers.



### Electrifying Public transport

Maharashtra government is working towards Electrifying 25 per cent of Public as-well-as last-mile delivery by 2025 in cities like Mumbai, Pune, Nagpur, Nashik, Aurangabad. The policy offers a Rs 30,000 incentive on three-wheelers and Rs 20 lakh on electric buses.

### Planning of Gigafactory

Maharashtra government is working on adding a supply-side incentive in the upcoming period. The policy is not yet disclosed in the Maharashtra EV policy 2021. But the government has mentioned upcoming incentives for EV production facilities, advanced chemistry cell battery factories, and component manufacturing plants. Maharashtra government also told the new residential building, the new residential buildings must have 20% of the parking space Electric vehicle-friendly.



### Bottomline

Maharashtra strives to become an electric vehicle hub by making it easy for the manufacturer and consumer through various incentives and subsidies. Maharashtra has maintained its lead in the manufacturing, finance, and industrial sector for years and now working towards capturing and growing the Electric Vehicle industry in the state. The revised Maharashtra EV Policy 2021 is a major booster to the current EV sector in Maharashtra.



# IMPACT OF EV POLICY ON HERO ELECTRIC IN MAHARASHTRA & GUJARAT

The newly revised Maharashtra EV Policy 2021 was announced on the 13th of July 2021 and is applicable till the 31st of March 2025. In which the policy provides benefits to the EV manufacturer and consumer. The policy amount announced was Rs 930 crore.

The Gujarat government, on 23rd of June 2021 has unveiled a four-year plan with a total outlay of Rs 870 crore to be offered as subsidy/incentive for new buyers of electric vehicles across segments and those investing in the development of infrastructure for EVs. These policies have impacted massively on some companies, and one among them is the Hero Electric scooter. Hero Electrics mid-speed scooter has seen a massive price drop with a vast margin through these policies. The scooter benefited from an increased subsidy provided by the FAME-II policy from the central government and the Gujarat EV poly 2021 as well as the Maharashtra EV Policy 2021 from the states.

## Maharashtra EV Policy 2021 effects on Hero Electric scooter

The incentives provided in Maharashtra EV Policy 2021 for Electric two-wheelers is that the early 100,000 electric buyers will get an incentive and extended subsidy of Rs 5,000 per kWh of battery capacity. Maharashtra EV Policy 2021 is also offering an "early birds' incentive" of 15,000.

- The Hero Optima Hx (single battery) prior cost Rs 53,000 costs around Rs 39,000 after incentives and subsidies.
- The Hero Optima ER (dual battery) prior cost Rs 58,000 subtracting subsidy of 25,000 final prices is around Rs 33,000.
- Hero Electric Photon prior cost Rs 71,000 subtracting subsidy of Rs 16,000 final cost is around Rs 55,000.
- The Nyx E5 costs Rs 46,000 after the subsidy and incentive benefits.
- The Nyx E5 ER (double battery) is much cheaper for Rs 38,000 after subsidy and an incentive benefit of Rs 25,000.



## Gujrat EV poly 2021 effects on Hero Electric Scooter

The incentives provided in Gujrat EV poly 2021 have a subsidy of Rs 10,000 per kWh of battery capacity on the first 1,10,000 electric two-wheelers sold.

- The Hero Optima HX (single-battery) prior cost Rs 53,600 subtracted subsidy of Rs 15,000 the final price is around 38,000.
- The dual battery version of Optima (ER) prior cost Rs 58,980 subtracted subsidy of Rs 20,000 the final price is around Rs 39,000.
- The hero Electric Photon prior cost Rs 71,449 subtracted subsidy of Rs 19,000 the final price is around Rs 53,000.
- The single battery Nyx E5 prior price Rs 60,000 subtracted subsidy of Rs 15,000 the final price is around Rs 45,000.
- The dual battery Nyx E5 ER earlier cost around Rs 63,000 subtracted subsidy of Rs 20,000 the final price is around Rs 43,000.



## Hero Electric assumptions

Hero Electric assumes the upcoming buyers to switch to mid-speed e-scooter with the implementation of state subsidy.

The CEO of Hero Electric Sohinder Gill said "With the introduction of the state policies, the greatest thing is that mid-speed scooters have become cheaper than the low-speed scooters. Many people were buying low-speed models for their affordability, they're going to switch over straightaway to mid-speed models. For them, the sticker price was the deciding factor. The low-speed e-scooter market will never go away, but instead of accounting for 70 per cent of all e-two-wheeler sales, it'll now drop down to 20 per cent. Till now, buyers could choose between a Honda Activa or a low-speed e-scooter for the same price, and that's why they weren't going for electric because there was too much of a difference in performance. With the subsidies, mid-speed e-scooters are now a more favourable choice".

## Bottomline

The Government policies will be boosting the entire Electric vehicle industry by benefiting the consumer as well as the manufacturer. And Hero Electric is one of such manufacturing units with a scope of improved and satisfied consumers.





# NISSAN EV HUB EV36ZERO OPTIMISES EV GENERATION

Nissan, a Japanese automaker, has unveiled the Nissan EV36Zero, a £1 billion flagship Electric Vehicle (EV) Hub in the United Kingdom, intending to achieve carbon neutrality and establish a world-first EV manufacturing ecosystem.

## What is the Project?

Nissan, Sunderland City Council, and Envision AESC, a green-tech battery manufacturer, launched the project. The project builds around three main pillars: the construction of a new gigafactory, the production of a new all-electric crossover, and the use of 100% renewable energy from a new microgrid. These steps are taking to electrify the lineup of the company while also achieving carbon neutrality.

Nissan president and CEO Makoto Uchida said this study is part of the breakthrough efforts of Nissan to achieve CO2 neutrality throughout the whole product life cycle. He added that their adjunct approach does not just include developing and manufacturing electricity but consumption of onboard batteries as energy storage and secondary use.

## Collaborate with Envision AESC: Source of Investment

Nissan will collaborate with Envision AESC, which supplies batteries for the Leaf and eNV200 in the UK for the past nine years. Envision AESC will invest £450 million in favour of the new model allocation to build the first Giga factory of Britain in the International Advanced Manufacturing Park (IAMP), a renewable-energy powered international manufacturing park. It will start as a 9GWh plant, but with future investments, it could grow to 35GWh. The new plant will reduce the cost of EV batteries, but it will also manufacture Gen 5 battery cells that are 30% denser and have a higher range. Both of these factors may hasten the adoption of EVs in the coming years.

"The task of the Envision Group is to provide global companies, governments, and cities with a net-zero choice for technology," said Envision Group founder and CEO Lei Zhang. "Their dedication to helping us achieve our global goal of making high-performance, longer-range EV batteries cheap and accessible to millions of EVs builds on our long-term partnership

with Nissan," he added. "By 2030, increased demand may result in up to £1.8 billion in new investment, 25GWh of additional capacity, and 4,500 employment. It will put the Northeast at the heart of a new EV centre in the UK, cooperating on research and development throughout the full battery lifetime, from storage to second life usage, V2G efficient charging, and applying standard sustainability," he concluded.

## An official statement by UK Prime Minister

"The announcement made by Nissan to build a new generation all-electric vehicle in Sunderland is a major vote of trust in the UK while working together with a new gigas factory from Envision-AESC", UK Prime Minister Boris Johnson said. He further added, "This is a key moment in our revolutionary electric vehicle and ensures the future in the decades ahead, building on over 30 years of history in the area."

## How can this project be able to generate job opportunities?

The project is consists of 6,200 jobs at Nissan and its UK suppliers based on its production history and more than 1,650 new jobs at Nissan and Envision AESC. The project will modernise and expand the EV capacity of the company in the UK over the long term.

The production of a new all-electric crossover will cost £423 million out of the total budget. This new vehicle will be designed for global markets and will build on the Alliance CMF-EV platform. Nissan designed and developed this platform in collaboration with Renault, and it is sharing between the two companies. This platform will assist reconstruct the one found in the Nissan Leaf and in the Nissan Ariya, which is preparing to hit the market next year.

The AESC project monitors and optimises AIoT technology energy consumption, production and maintenance. It will boost the production of batteries and power up to 100,000 Nissan EVs annually. With the new Gen5 battery cell the cost-competitiveness of nationally manufactured EV batteries is increasing by 30 per cent, improved range and efficiency. It will power new Nissan vehicles and make batteries cheaper for the customers and EVs more accessible in the future.

Sunderland City Council will provide a 100% renewable microgrid, which will help save 55,000 tonnes of CO2 per year. Nissan providing Existing solar and wind farms will be incorporated.

*Check out our website to know more!*



## UPDATES ON THE NEW OLA ELECTRIC VEHICLE

*Not just Green, It is way more than that!*

Ola already impressed a lot of people and raised their interest in it. Ola's new battery-powered product will be launched in the Indian market with a variety of external colour options. The company was recently shown in a social media post some of its colours have included black, pink, light blue, and white.

This scooter was introduced before the launch and can be booked for just Rs 499. The booking has already started on the night of 15th July. Specifically, the company has already received more than 100,000 orders for the Ola Electric scooter within 24 hours of booking. According to the company, you can book this with a completely refundable booking amount. This means that if the buyer wishes to cancel the reservation later, his booking amount will be refunded. CEO Bhavish Aggarwal said in a statement that they have received bookings from customers across the country for Ola's first electric scooter, which is very encouraging. Electric vehicle users love it

### How to book an Ola Electric scooter?

- Step 1: To book an Ola scooter, first, go to the official website of Ola Electric.
- Step 2: Click on Reserve for 499 and enter your mobile number to proceed. Don't forget to verify the captcha.
- Step 3: Then, create your account by filling desired information on the website.
- Step 4: Select payment mode and it's done. You can book a scooter for yourself by following a few simple steps. Meanwhile, Ola Electric said the first customer will prioritize the delivery of the scooter.

### Ola Electric scooter features

Ola electric scooter has everything top-notch like speed, autonomy, and technology. The company's CEO, Bhavish Aggarwal, recently revealed on Twitter that Ola Scooters is equipped with advanced features such as a large space, app-based keyless access, and several market-leading target devices. In addition, according to the photo, there are dual projection headlights, integrated seats, charging

slots, DRL LEDs, LED tail lights, luggage hooks, split rear handle, and in terms of technology, it has a fully digital instrument. The company has not announced the specification of the scooter yet but details about the scooter, delivery schedule and specifications such as scooter mileage and charging times will be published soon.

The electric scooters of the future Ola are somehow similar to the EtergoApp Scooter. Ola Cabs acquired the Dutch electric scooter company Etergo in 2020. This scooter is equipped with a rechargeable battery with a high energy density. As per the company, when fully charged, it can travel up to 240 km. The Etergo AppScooter accelerates from 0 to 45 km/h in 3.9 seconds. This electric scooter has a capacity of 50 litres under the seat.

Thanks to the company's charging network, you can charge 50% of your Ola scooter in just 18 minutes, and with this charging, you can easily cover distances of up to 75 km. After you buy the scooter, the kit is equipped with a home-charger unit, which can be installed at home. The company plans to release information about the features and prices of this scooter in the coming days. The company says it is willing to set a price for the car so that more people can buy it easily. The scooters are made at the company's factory in Tamil Nadu. The first phase of the company's factory will be completed shortly. The centre is expected to be operational next year with an annual capacity of 10 million units.



### Official Statement by Bhavish Aggarwal, CEO of Ola

"Thank you to everyone who has reserved our scooter! On August 15th, there has planned an Ola scooter launch ceremony. Will provide all product specifications and availability dates. I'm excited about it," Bhavish Aggarwal, Chairman and Group CEO of Ola, stated in a tweet dated August 3, 2021. Ola Electric Rises \$100 Million Long-term Debt. Ola Electric is one of the leading companies focused on making Electric mobility convenient, dependable, and affordable. With its improvement in the vehicle, battery manufacturers, cities, driver-partners, and the mobility ecosystem.

Keep your eyes on the 15th of August! Launches.



## MG ZS EV OLD V/S NEW

The ZS EV was dispatched distinctly in mid-2020 and has gotten minor overhauls simply a year in the wake of appearing in India.

MG Motor India originally dispatched the MG ZS EV in January 2020. At dispatch, it was MG's second item in India after the Hector SUV. The MG ZS EV accumulated good marketing projections for the organization and presently a year after its dispatch, the organization has given it a minor update. The new 2021 MG ZS EV has been dispatched in India and it brings some much-needed developments. All in all, what's going on and what are the contrasts between the new 2021 MG ZS EV versus the old ZS EV? Here, we have every one of the subtleties for you.

Presently, there is no distinction in the manner in which it looks. The solitary change is that the ground freedom has been expanded to 205 mm and the battery situation has likewise been set higher than previously.

Other than that, the MG ZS EV looks precisely equivalent to the general plan and its appearance stays flawless. So it gets components like chrome studded grille, London-I projector headlamps with LED Daytime Running Lights (DRL), LED taillights, windmill-motivated 17-inch precious stone cut machined amalgam wheels, rooftop rails, back spoiler, wing mirrors with side marker and body shaded guard and so forth. Obviously, it stays unaltered as far as measurements also. The SUV estimates 4314 mm long, 1809 mm in width, 1620 mm in stature and 2585 mm in wheelbase.

### Inside and Features

While the insides of the new MG ZS EV continue as before as the archetype, there have been a couple of updates in its rundown of components. So the new MG ZS EV sources the I-Smart 2.0 framework from MG Hector which is a further developed adaptation of the I-Smart framework in its predecessor. Then it comes furnished with a similar 8.0-inch touchscreen and three driving modes - Sport, Normal and Eco. Then, at that point, it likewise comes outfitted with a double sheet all-encompassing sunroof, downpour detecting front wipers, voyage control, auto headlights, power-movable driver seat, press button start-stop with Smart Entry, electronic stuff handle and PM channel.

### Safety

Taking everything into account, the principal thing

we should note is that the battery of the MG ZS EV is IP6 affirmed, so it can work in various landscapes. Then, at that point it gets six airbags, ABS, brake help, ESC, electric stopping brake, tire-pressure screen, ISOFIX mount, slope start help, slope plummet control, back camera, stopping sensors and warmed wing mirrors.



### Powertrain

The 2020 MG ZS EV used to get a 44.5kWh fluid-cooled lithium-particle battery, which was professed to convey a driving scope of 340 km on a solitary charge. The battery on the new 2021 ZS EV additionally has similar specs yet it is new and MG considers it a cutting edge fluid-cooled lithium-particle battery. The organization guarantees that the new 2021 MG ZS EV will convey a driving scope of 419 km on a solitary charge, which is around 79 km more than previously. The ZS EV is controlled by an electric engine that produces 143 PS of force and 353 Nm of pinnacle force. It accompanies a solitary speed programmed transmission.

### New Tires

The new MG ZS EV has been given new more extensive and better tires. Prior it used to get 215/50-R17 tires, however, the new MG 2021 model gets 215/55-R17 tires.

### High Ground Clearance

The old 2020 MG ZS EV had a ground clearance of 161 mm however the new MG 2021 ZS EV gets 177 mm of ground freedom, all gratitude to the overhauled battery pack situation by the organization.





# HYUNDAI IONIQ 5 V/S HYUNDAI KONA ELECTRIC

The South Korean multinational automotive manufacturer Hyundai has promised 23 new Electric Vehicles including 11 all-electric models by 2025 & plans to introduce a family of 4 wheelers under the Ioniq brand.

## Hyundai Ioniq 5

Hyundai Ioniq 5 is the 1st model under Hyundai's Ioniq electric sub-brand. With the stylish crossover body, with 2 battery sizes. Both the batteries can be had with either a rear-wheel-drive or all-wheel-drive configuration. Hyundai hasn't revealed anything about the Ioniq launch in India.

HYUNDAI  
IONIQ 5



### Specifications

- The electric motor type is permanent magnet synchronous.
- 4 driving modes are Eco, Eco+, sport, and comfort.
- With a 350kw charger, IONIQ 5 can charge from 10 per cent to 80 per cent in just 18 minutes.
- Battery sizes 72.6kWh and 58kWh.
- Produces a combined power of 306hp and a total of 605Nm of torque.
- Automatic single-speed reduction gear and a front-wheel drive.
- Front ventilated disc and rear disk brakes.

### Design

- Body style crossover.
- The material used is aluminium and high tensile strength steel.
- 5 door 5seater.
- Length is 182.5 inches.
- Height is 63.2 inches.
- The wheelbase is 118.1 inches.
- Clamshell bonnet.
- Pixelated front and red lights.
- Twin 12 inches screen.
- Flexible seats that slide and recline.

### Features

Blind-Spot Collision, Avoidance Assist, Driver Attention Warning, Avoidance Assist, High Beam Assist, Highway Driving Assist, Intelligent Speed Limit Assist, Parking Collision Avoidance-Assist, Rear, Cross-Traffic, Collision-Avoidance Assist, Anti-lock brake system, Anti-theft System, Remote keyless entry alarm, Panic alarm, Blind-Spot Collision Warning, Brake Assist, Child safety locks, Remote Smart Parking Safe Exit, Assist Surround View Monitor.

### Price

Expected price Rs 20.00 Lakh.

## Hyundai Kona Electric

Hyundai Kona Electric is India's 1st Electric car by Hyundai. Commonly represented as India's 1st Electric SUV with its raised hatchback SUV look. Offers a powerpack performance and high acceleration over long distances.

HYUNDAI  
KONA  
ELECTRIC



### Specifications

- 3 driving modes are Eco, sport, and comfort.
- With a public CCS 100 KW charger, it can charge in 39 minutes.
- battery sizes 64kwh
- Power of 150Kw and 395Nm of torque.
- Automatic single-speed reduction gear.
- Front-wheel drive.
- Front ventilated disc and rear disk brakes.
- Range of 452KM once fully charged.

### Design

- Body Style Sport Utility Vehicle SUV.
- The material used is advance high-strength steel and high tensile steel.
- 4door 5seater.
- Length is 164.6 inches.
- Height is 61.2 inches.
- The wheelbase is 102.4 inches.
- Distinctive split type LED Headlamps with LED DRLs.
- 10 Way Power Driver Seat.

### Features

Anti-lock brake system, Anti-theft System, Remote keyless entry alarm, Panic alarm, Blind-Spot Collision Warning, Brake Assist, Child safety locks, Electronic stability control, Forward Collision, Avoidance Assist with Pedestrian Detection Front airbags for driver and passenger, Hill-start assists control, Immobilizer.

### Price

Starts at ₹ 23.79 Lakh and goes up to ₹ 24.03 Lakh.

**Overview:** Hyundai Ioniq 5 is more of a classic look with highly featured and advanced power and spot-on 2 battery facilities. Whereas, Hyundai Kona Electric is a sporty-looking SUV with high features, safety, and design with a powerful range of 452 Km, but needs a stretch in the budget.



## OSM RAGE+ V/S OSM RAGE

OMEGA Seiki Mobility was founded in 2016 with the aim to become a smart solutions provider in the electric vehicle market. Today, OSM aims to make a significant contribution to the successful sustainable development of India. To this end, Omega Seiki signed a New York-based C4V contract and a Memorandum of Understanding (MoU) for the production of semiconductor batteries in India. OMEGA Seiki Mobility is part of the Anglian Omega Network and operates in six countries: India, United Arab Emirates, Switzerland, Thailand, Japan, and Hong Kong. The group embarked on a modest tour of a steel mill in 1971. The group continued to expand its capabilities and diversify into electric vehicles, high-tech auto parts, infrastructure, supply chain management services, sales, and other aspects. Today, in this article we will review the two powerful models of OSM i.e, OSM RAGE+ and OSM RAGE. So, are you ready, let's go!

### Overview

After extensive development and research, OSM RAGE+ and OSM RAGE, electric three-wheelers have been completed, resulting in an elegant and modern cabin, aerodynamic design, and a spacious loading facility. Taking into account some parameters, the three-wheeler solves the problems of vaccine delivery and transportation individually. Battery-powered vehicles can store vaccines at rest for 72 hours at temperatures as low as -20 degrees Celsius. The company has developed several three-wheelers with refrigerators with TransACNR. No vehicles other than RAGE+ and RAGE are available in the market with smart GPS tracking solutions, shortest track calculators, and cloud-based data collection and analysis.

RAGE+ and RAGE offer 70-80 km in a complete charge which seems a decent range when we talk about an EV.



India's logistic sector is important and growing day by day. As India moves towards the electric vehicles revolution, almost all types of vehicles are switching to electric vehicles, so the logistics industry is taking active steps to bring electric vehicles to market. Three-wheelers play an important role in logistics, and electric vehicles are slowly entering the market. Two of these vehicles are the OSM Rage+ and OSM Rage. We have given the detailed review above to ease your decision. So, choose wisely and we will see you in the next review of another electric vehicle.



### Price

Rage+ comes with a price of 3.40 lakh rupees without a carrier and 3.50 lakh with the carrier. The company currently sells vehicles in Delhi and most of South India. However, if you can live outside these places, the company can transport vehicles anywhere in India at your request. The brand's first branch will open in Telangana, followed by showrooms in Visakhapatnam and Vijayawada. In the case of Rage+, you can choose any color among three options: black, blue, and yellow. On the other hand, RAGE comes with only one variant: black.

Technical Specification	Rage+	Rage
Loading Capacity (GVW)	960 kgs	960 kgs
Load carrier dimensions	1730 x 1475 x 260	1500 x 1200 x 1400
Vehicle Dimensions	3200 x 1475 x 1710	3145 x 1200 x 1850
Vehicle Weight	480 kgs (With Open Carrier)	400 approx. (With Open Carrier)
Top Speed	45 kmph	45 kmph
Range	70-80 kms	70-80 kms
Battery Type	Li-ion 48V	Li-ion 48V
Battery Capacity	7.5kWh	6kWh
Charging Time	3-4 Hours	3-4 Hours
Rated Power	4.8kW	3kW
Transmission Type	Independent	Independent
Gear Transmission	Manual Boost Mode	Manual Boost Mode
Front Suspension	Damper + Helical	Damper + Helical
Rear Suspension	Independent suspension + Dampers	Independent suspension + Dampers
Brakes	Front and rear Hydraulic	Front and rear Hydraulic
Battery Warranty	3 Years or 80,000 kms	2 Years or 50,000 kms
Driver Cabin	Closed	Open
Carrier Design	Open Carrier Box	Closed / Open Type



# NISSAN NOTE E POWER VS RENAULT ZOE

Nissan and Renault are known for producing similar cars most of the time because of their joint production facilities in some countries like India.

## Nissan Note E Power

The Note E Power is known for its bold look, spacious, stylish interior, and powered acceleration. The Note E Power is powered by an electrified powertrain that offers 100% electric motor drive but without the restraint of battery charge. This 5door, 5seater has a range of 1300 km.

### Specifications

- Motor type Synchronous
- Power 108hp
- Torque 254Nm at 0-3008rpm
- Battery type Lithium-ion
- Battery capacity 1.5kWh
- Fuel tank 47 liters
- Boot space 532 liters
- Length 4100mm
- Width 1695mm
- Height 1535mm
- Wheelbase 2600mm

### Design

- Hatchback body type
- V-motion grille exterior
- Sleek four in-line LED projector headlights

### Interior

- Zero gravity seats
- 340-litre boot space
- 7-inch digital integrated display
- The 9-inch touchscreen infotainment system

### Advanced Safety Technology

- Intelligent Driver Alertness
- Intelligent Emergency Braking with Pedestrian Detection
- Intelligent Forward Collision Warning
- Intelligent Rearview Mirror
- Lane Departure Warning
- Intelligent Lane Intervention
- Intelligent Trace Control

### Price

- Estimated to be around ₹ 20 lakhs.



## Renault Zoe

Renault Zoe is a solution between higher price and low range, as it has a higher range and affordable price. The 5door, 5seater has a range of 200 miles on a full charge.

### Specifications

- Electric motor: 100 kW @ 4200-11163 rpm, 245 Nm @ 1500-3600 rpm
- Location: Front Top speed: 87.0 mph / 140.0 km/h
- Acceleration 0-100 km/h: 9.90 s
- Drivetrain: Front-wheel drive (FWD)
- Battery: 54.66 kWh,
- Voltage: 400 V
- Weight: 326KG
- Battery type Lithium-ion
- Battery capacity 54.66 KWH
- Torque 245NM
- Height 1562mm
- Wheelbase 2500mm

### Design

- Hatchback body type
- Full LED lighting
- Sleek lines

### Interior

- 10-inch display
- 9.3-inch touchscreen dashboard
- 338 litres of boot space

### Safety

- Auto-Hold assistance
- Automatic dimming of high beams
- Automatic emergency braking
- Automatic parking brake
- Blindspot warning
- Front, rear, and sides parking radar
- Hands-free parking
- Lane departure warning
- Lane-keeping assist
- Overspeed prevention
- Recognition of traffic signals
- Rearview camera

### Price

- Estimated to be around Rs.8.00 Lakh.





# 5 INDIAN EV BATTERY MAKERS TO WATCH OUT

Who's in charge of the newborn electric car market? Who has more batteries available? And, even today, the batteries are not produced by car manufacturers but by the Asian electronics giants. Even Tesla, which manufactures most of the batteries it fits on its Evs in its factories, actually has Panasonic handle the production of the cells. And Panasonic, in 2019, has seen itself snatch the crown as a leading company in the production of batteries for electric cars globally. Today, in this post we will tell you about the top 5 EV battery makers of India. Are you ready, excited, let's go!

## Amara Raja Batteries



Amara Raja Batteries is often referred to as the second-largest automotive battery manufacturer. It opened the country's first lithium-ion battery technology center at its Tirupati factory, Andhra Pradesh at the beginning of the year. The Advanced Lithium-Ion Research Center at Tirupati headquarters is a pilot project and will be the country's first lithium-ion battery center in the coming years. The company invested Rs 20 crore in the facility. However, this does not include the technology transfer fees and bids paid when ISRO, along with nine other companies, won the National Space Agency's January 2019 bid.

ISRO listed 10 out of 141 companies in 2019 and offered to transfer lithium-ion battery technology to those companies. However, none of them went into production so far. Amara Raja was the first manufacturer to start making EV batteries. Through technology transfer, ISRO will help these companies set up lithium-ion battery manufacturing facilities and train their employees. Rs 1.6-lakh crore Local



## Tata Group

Tata Group is already famous for its electric cars like Nexon EV. The group had already announced its plans to invest in manufacturing lithium-ion batteries in Gujarat. Many TATA group companies like Tata Chemicals and Tata Motors have a significant presence in Gujarat. They want to continue investing in the state and to invest not only in electric vehicles but also in lithium-ion battery projects. They are in talks with the state government to increase the capacity of Tata Chemicals. Gujarat is a very important state for the Tata group. The company had received revenue of Rs 18,000 crore

from the state in 2018. Now, the company is ready to expand its presence in the technology space and also invest in renewable energy. Tata Chemical also signed a Memorandum of Understanding to transfer lithium-ion battery technology with the Indian Space Research Organization (ISRO).



## Maruti Suzuki

Suzuki Motor Corp., the Japanese company that sells the largest number of cars in India will fit a new type of lithium-ion batteries in its premium cars sold in India. The company will manufacture these batteries from its battery plant in Gujarat starting in the coming years. The long-lasting Lithium-Ion battery will replace the conventional lead batteries in cars sold by Maruti Suzuki India Limited.

The company plans to purchase a lithium-ion battery from a new joint venture (JV) between Toshiba and Denso to build a package of hybrid vehicles and it will be limited to only 20,000 hybrid vehicles per year. Hybrid vehicle batteries and lithium-ion batteries have different chemical combinations. The first phase of the project has been delayed for several months due to functional disruptions caused by the Covid-19 pandemic, but the company presented plans for the second phase of the project, as the first phase of work is already behind schedule.



## Hero MotoCorp

Hero MotoCorp has recently introduced its first electric two-wheeler by 2022. The company can choose the time between January and March of the year 2022 for this. Hero MotoCorp recently joined hands with Taiwan-based battery-swapping network and electric vehicle maker Gogoro, after which the company's discussion of launching electric vehicles has intensified. In addition to the production of electric vehicles, the plant will also be ready to try its luck in the production of lithium-ion batteries, which is a priority for Ather Energy in the future. The factory has a capacity of 120,000 batteries per year. Ather Energy is the only partner electric vehicle supplier in India that produces its batteries and has 13 patents pending for battery design and manufacturing that have already been filed by them.



## Exide Industries

Exide is a very famous name in the battery manufacturer company. You know - our inverter batteries at home. It is working on lithium-ion technology to meet the demand of the Electric Vehicle (EV) industry. However, the company believes that even after the popularity of EVs, the traditional 'lead-acid battery' will remain relevant.



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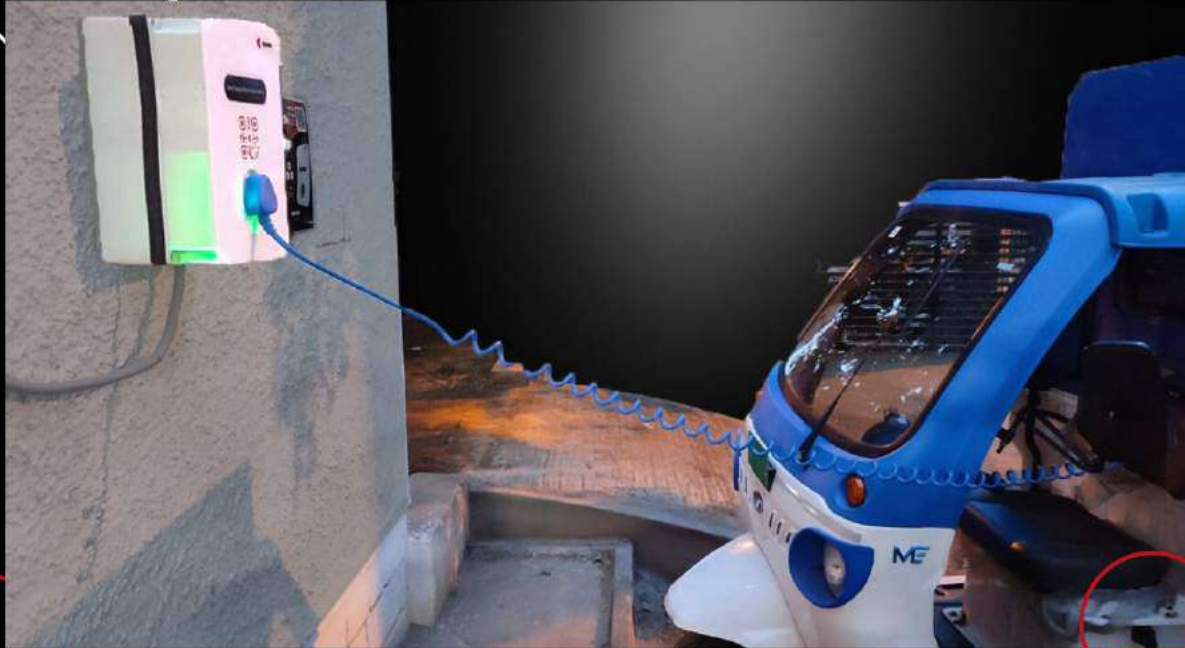


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