



# EVCONNECT

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NEWSLETTER

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## FROM THE CEO'S DESK

Dear Friends,

I hope the latest edition of EV Connect, our monthly electric mobility focused newsletter, finds you in good health and spirits. As we make headway into the new year, the 32nd edition brings to you a conversation with Mr. Vikas Mishra (Founder and CEO, MoEVing) who stresses on the need for electrification of the urban freight sector — especially two-wheelers and three-wheelers — to decarbonize the last-mile delivery network. He also talks about measures that government can adopt to accelerate the adoption of electric vehicles by the private sector. This issue also has a special feature on how top EV players are building a network of charging stations across Indian cities, and as always, we present the latest global and Indian news from the sector.

Various developments are taking place in electric mobility and it is often difficult to keep up with them. We hope this curated newsletter will be beneficial to those who are seeking the latest information on electric mobility.



Sincerely,

**Dr. OP Agarwal**  
CEO, WRI India

## WATCH

Presenting Power Talk – EV Connect's exclusive monthly interview with experts, policymakers and stakeholders discussing key insights. We also present one hand-picked video that showcases a global EV innovation.



**Power Talk with Vikas Mishra**  
Founder and CEO, MoEVing



**Electric Bikes: A low carbon and healthy mode of transport**  
Best Electric Vehicle



# POWERTALK

## IN CONVERSATION WITH VIKAS MISHRA

Founder and CEO, MoEVing

Interview by Amit Bhatt, WRI India

Currently, in the freight segment, especially the electric 2-W and 3-W market, the total cost of ownership is very attractive as compared to fossil fuel powered vehicles given the cost advantage and the level of emissions reduced.

Today, original equipment manufacturers (OEMs) are largely dependent and much dependent on foreign countries for battery supply. The announcement of a production-linked incentive (PLI) scheme by the central government will give a push to domestic battery manufacturing.

**Q. Can you tell a little bit more about MoEVing and what is the idea behind starting this company?**

**A.** MoEVing is India's first holistic electric vehicle (EV) technology platform providing full-stack solutions towards transitioning to electric vehicles. Our work ranges from demand aggregation, and supply optimization to connecting with charging infrastructure providers and financing institutions to help e-commerce players and FMCG companies make the switch to electric.

In 2020, when the COVID-19 pandemic hit India, there was a sudden rise in the e-commerce market as more and more people were ordering daily needs from home. At that point, the idea to start MoEVing triggered as we focused on electrifying last-mile deliveries. The company launched in January 2021 and is today operating across 10 cities.

**Q. What triggered electrification of the urban freight sector versus passenger mobility?**

**A.** Currently, in the freight segment, especially the electric two-wheeler and three-wheeler market, the total cost of ownership is very attractive as compared to fossil fuel powered vehicles given the cost advantage and the level of emissions reduced. Today, EVs are gaining popularity in the urban freight sector, so, it is easier to plan charging infrastructure solutions, fleet routing and scheduling better.

**Q. Tell us about some of the challenges and opportunities witnessed in your one-year journey?**

**A.** There is a plethora of demand potential in electrification, especially with e-commerce companies and last-mile deliveries. But the challenge is finding the right product (e-2Ws and/or e-3Ws) along with customized financing solutions. So, if customers do not receive a quality product, it will impact their overall EV experience. In recent times, we have tried to overcome this challenge by designing our own tests and making sure that our selection criteria is right.

**Q. How have you addressed the challenge of finding the right product and charging solution through your business model?**

**A.** We have developed an original equipment manufacturer (OEM) engagement strategy. We select three to four e-2Ws and e-3Ws models; basis their range, speed and robustness. We then select the right OEMs and ensure a long-term supply commitment. On the charging solution front, we carry out a geo-spatial mapping of the customers' warehouses to select the optimal locations for setting up a charging hub within a 2-5 km radius. Around 50 e-3Ws can be charged simultaneously in these hubs, which helps us in meeting the requirement of multiple clients within that radius. It not only saves time but also increases the productivity of the vehicles and the companies.

**Q. Electric vehicle financing is a big issue; how are you addressing this challenge?**

**A.** EV Financing is a big barrier to EV uptake and there are two elements involved in it. One, traditional financiers like big banks are not willing to finance electric vehicles, especially 2-Ws and 3-Ws. Second, most of the non-banking financial companies (NBFCs) who are into the EV financing business are charging a very high rate of interest which makes EVs 30 to 40% more expensive than the internal combustion engine vehicles. So, the EMI burden comes on the consumer.

As a solution provider, we aim to make the financing ecosystem smoother. We collect data from the e-commerce/FMCG companies and share it with the financial institutions that are willing to be a part of this market. This boosts the confidence level of the financiers, leading to a reduction in the interest cost from the same financiers. We also share the same data with big banks. In recent times, a few big banks have started EV financing, however, the number is still low. There is still a huge gap between the demand and the financing available for the vehicle, which needs to be covered soon.

**Q. How are you resolving the issue of skill gap in the current EV market?**

**A.** This is a new technology and hence it is necessary to upskill and reskill the workforce accordingly. We are currently running a driver training program, where we train the driver about EVs and their components before they try their hands on a vehicle. Through our moEVing app, we capture data from the vehicle such as speed, battery charging, range etc. that helps in providing feedback not only to us but to the driver as well. We are also upskilling our current workforce who are working in the EV charging hubs so that they can understand how to repair and maintain chargers.

**Q. How government and, civil society, like WRI India can help scale the EV transition in India?**

**A.** The government has been very supportive in the last few years, whether it is through the FAME-II scheme, non-fiscal subsidies, launching green number plates etc. Several states, like the Delhi Government, have also come up with progressive EV policies such as subsidies for e-3Ws, single-window facility for installation of private electric vehicle (EV) charging stations, 5% financial subvention scheme and a lot more. All this has accelerated the EV uptake in the country.

However, if we go by the data, EV sales is still 1.6% which is very low as compared to countries like US, China and Europe. This is mainly due to barriers like battery supply, charging infrastructure, financing etc. Today, OEMs are much dependent on foreign countries for battery supply which is leading to the higher cost of the vehicle. The recent announcement of a production-linked incentive (PLI) scheme by the central government will give a push to domestic battery manufacturing. To build a robust charging infrastructure across the country, both the central and state government should join forces with private players for planning, investing and setting up an effective charging network. And finally, on the financing front, government-aided banks should take a step to lead the sector. There should be a mandate where banks should be asked to finance a certain percentage of electric vehicles. All these extended initiatives from governments will not only help in reducing the cost burden from the consumers but will also further the EV market in India.



## UPDATES FROM THE WORLD

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### **White House unveils plan for EV charging network** | *Policy Measures*

The Biden administration, with the goal of transforming the US auto industry, released a federal strategy to build 500,000 charging stations for electric vehicles across the country and bring down the cost of electric cars. The USD1.2 trillion infrastructure package allocates USD5 billion for state transportation departments to support the expansion. An additional USD2.5 billion is also available in grant opportunities to give rural and marginalized communities access to electric vehicles. [Read more](#)

*Takeaways for India:* The electric vehicles market is growing steadily in India. However, the presence of an extensive charging network is still a big barrier to its uptake. A push by the Center and state governments, towards creating a robust charging network across the country, will help accelerate the transition that is critical to putting India on a low emissions trajectory.

### **New York State's governor calls for 100% electric school buses by 2035** | *Policy Measures*

New York Governor Kathy Hochul recently announced that the state's entire school bus fleet will be completely electrified by 2035. The governor outlined a plan to introduce legislation in this regard, along with a requirement that, by 2027, all new school bus purchases will be zero emissions. The proposal will also help create new jobs and further cement New York's leadership on transportation electrification and climate action. [Read more](#)

*Takeaways for India:* In India, air pollution greatly impacts children's physical health and growth and education – considering schools were declared shut during particularly bad spells. Electrification of the school bus fleet is a critical step toward creating a healthier and cleaner future for children.





## **Sony explores electric car business, presents new vehicle model** | *Market Development*

Japan's Sony Group, recently revealed plans to start an electric car company, making it the latest electronics manufacturer to target the automotive sector. The electric cars will be produced under the firm's new company, Sony Mobility Inc, which is expected to launch soon. The company introduced a new electric vehicle model, VISION-S 02, during the CES technology conference that took place in Las Vegas, USA recently. [Read more](#)

*Takeaways for India:* Many big automobile manufacturers worldwide are investing heavily in electric vehicle technology to make it more accessible and comfortable. In India, leading manufacturers are announcing their entry into the sector. However, for a smoother transition and to attract more consumers, the government needs to focus on reducing barriers such as lack of charging infrastructure and more access to EV financing among others.

## **Electric vehicle sales overtake diesel models for the first time in Europe** | *Market Development*

For the first time, the sale of EVs in the European market surpassed that of diesel cars. According to the Financial Times preliminary estimates, across 18 European markets revealed more than a fifth of vehicles sold were electric, while diesel cars slumped to less than 19%. In December 2021, around 176,000 battery EVs were sold in Western Europe—a 6% increase on December 2020 levels – while only 160,000 diesel cars were sold by the car makers.

[Read more](#)

*Takeaways for India:* Such reports play a crucial role in galvanizing carmakers to further boost their EV credentials. In India, EV sales gained momentum in 2021, but the number is still low when it comes to the sale of ICE vehicles. This is mostly due to challenges like charging, financing, overall vehicle cost, product models etc. The Government has taken many transformative steps over the last few years to scale the EV market, however more coordinated efforts are needed from both government and private players to surmount these barriers.



### **Renault aims to be an all-electric car brand in Europe by 2030** | *Market Development*

Renault which is a leading automobile brand in Europe aims to be an all-electric car manufacturer in Europe by 2030. The company earlier planned to become 90% electric by 2030. The shift in their electrification plan is in line with the European Union's strategy to halt sales of all new internal combustion engine cars by 2035 to curb emissions. [Read more](#)

*Takeaways for India:* In India, only a few leading car brands have launched their electric vehicles in the market. Challenges like the high upfront cost and lack of charging infrastructure along with limited models to choose from is key barriers to EV adoption. Indian carmakers must take a progressive approach and come up with stronger electrification plans to help in achieving the country's net-zero ambitions.



## UPDATES FROM INDIA

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### **Electric mobility sales accelerate in 2021: SMEV** | *Market Development*

Good News! The Indian electric vehicle market saw a huge growth in 2021, especially the electric two-wheeler (E2W) which recorded total sales of 2,33,971 in 2021 as against 1,00,736 units sold in 2020. This includes both high-speed and low-speed e-2Ws. The high-speed e-2Ws, which have a speed greater than 25km/hour and require a full license, registered a whopping 425% growth, while the low-speed e-2Ws (less than 25km/hour, no license, no registration) grew by 24%. [Read more](#)

### **Delhi Government and CESL sign MoUs for EV charging stations, interest subvention** | *Policy Measures*

The Delhi Government signed an agreement with the Convergence Energy Services Limited (CESL) for providing 5% interest subvention on loans for the purchase of electric rickshaws, e-autos, e-carts and electric light goods vehicles. With this landmark step, Delhi has now become the first state in the country to provide easy financing along with interest subvention on the purchase of EVs. The Transport Department, Government of NCT, Delhi also inked another MoU with CESL, for setting up electric vehicle charging and battery-swapping stations at 14 cluster bus depot locations across Delhi. [Read more](#)

### **CESL floats biggest-ever tender for 5,500 electric buses across 5 cities** | *Strategy and Initiative*

Convergence Energy Services (CESL), a wholly-owned subsidiary of Energy Efficiency Services (EESL), announced the biggest-ever tender for electric buses (e-buses) under the Grand Challenge scheme. The move aims to deploy 5,450 single-decker and 130 double-decker electric buses in 5 cities — Bengaluru, Delhi, Surat, Hyderabad and Kolkata. The first lot of e-buses are expected to hit the roads by July 2022. [Read more](#)

### **IIT-Madras launches master's program on electric vehicles** | *Skill Development*

Indian Institute of Technology (IIT) Madras will be launching a master's program on electric vehicles. The interdisciplinary dual degree (IDDD) will be offered to BTech and dual degree students. The students graduating from this program will have the skill sets required to pursue job opportunities in EV product development including EV integration, vehicle aggregate engineering, communication and calibration, verification and validation, and product and portfolio planning. [Read more](#)





### **JSW launches electric vehicle policy for employees** | *Market Development*

Business conglomerate JSW Group recently rolled out a green initiative for its employees where they will be offering incentives on electric vehicle purchase with special provisions for free charging stations and separate parking facilities at offices. This is the first Initiative of its kind by a major Indian corporate house. The policy will facilitate up to Rs 3 lakh financial incentives for employees to purchase electric four-wheelers and two-wheelers. [Read more](#)

### **Delhi Govt. notifies 'Aggregators' Policy' on electric vehicles** | *Strategy and Initiative*

The Delhi Government recently notified an 'Aggregators' Policy' to mandate electric vehicle (EV) fleets for ride aggregators and delivery services. The policy is aimed at the adoption of EVs in a bid to combat air pollution in Delhi. The notification directs all cab aggregators and delivery companies to ensure that at least 10% of newly operated two-wheelers and 5% of four-wheelers over the next three months be electric. [Read more](#)

### **CESL plans to set up 900 more EV charging stations in India in 2022** | *Strategy and Initiative*

State-run Convergence Energy Services Limited (CESL) plans to install at least 900 more electric vehicle charging stations in the country in 2022. The firm has tied up with various private and public companies and urban local bodies to set up public charging infrastructure across the country. CESL also recently launched the 'MyEV' app — a digital marketplace to enable the deployment of electric vehicles in the country. [Read more](#)

### **Hero Electric partners with Shriram City Union for finance solutions** | *Policy and Financing*

Hero Electric recently tied up with Shriram City Union Finance to facilitate loan schemes for its electric two-wheeler buyers. The collaboration aims to make e-scooters more affordable and attract cost-conscious buyers with attractive financing solutions. The partnership will help customers to avail a fully digital and paperless loan procedure with on-the-go financing options. [Read more](#)



## INITIATIVE



### e-Sawaari - India's first electric bus coalition launched

Electric bus (e-bus) adoption is fast gaining traction in India with multiple cities working to electrify their bus-based public transport systems. To maintain this traction, NITI Aayog launched the 'e-Sawaari- India Electric Bus Coalition', in partnership with Convergence Energy Service Limited (CESL) and World Resources Institute, India (WRI India), supported by Transformative Urban Mobility Initiative (TUMI). The coalition aims to facilitate peer-to-peer learning between different stakeholders in the e-bus ecosystem with the intent of addressing challenges and tapping into opportunities. [Read here](#)

## BLOGS AND INSIGHTS



### Abating transport emissions with electric vehicle adoption in India

*By Dr. Parveen Kumar, Anshika Singh, Anuja Jadaun*

With India's commitments at the COP26 summit to achieve the net-zero emissions status by 2070 EVs could help realize these goals and play a pivotal role in India's green narrative. The blog explores how innovation and policy measures can help fast-track the transition to EVs. [Read here](#)

## ARTICLES



### How Delhi is becoming a lighthouse city for electric mobility in India

*By Amit Bhatt*

EV registration in Delhi has risen sharply to 9% between September-November 2021 as compared to 1% in 2019-20. This oped highlights three strategic approaches that the Government of Delhi has adopted to scale up EV uptake in the city. [Read here](#)



# EV FEATURE

## India's rEvolution: Top EV players building network of charging stations

by Benedikt Sobotka, Mathy Stanislaus | November 2021 | This article first appeared in [cnbctv18.com](https://cnbctv18.com)

The electric vehicle (EV) industry is proliferating as global leaders in the automobile sector are focusing on curbing carbon emissions. In India too, the EV segment is witnessing a paradigm shift as incentive-laden deals are being offered to buyers by the Centre and the state governments. Currently, one of the primary goals for EV makers and industry players is to build an expanded network of charging stations. According to industry estimates, India will require more than 4 lakh charging stations by 2026. To fulfil the requirement, a robust network of charging stations is required. The network will ensure that the end-user requirement is being successfully fulfilled. Multiple conglomerates are working towards this goal and here are the top players.

### Energy Efficiency Services Limited (EESL)

EESL is a joint venture of four Public Sector Undertakings -- National Thermal Power Corporation (NTPC) Limited, Power Finance Corporation (PFC) Limited, Rural Electrification Corporation (REC) Limited, and Power Grid Corporation of India Limited (PGCIL). The company is backed by the Union Ministry of Power. As of January 2021, EESL reported a network of 207 public charging stations and had plans to install roughly 500 by the end of the fiscal.

### TATA Power

TATA is another major player that is working to generate resources to meet the growing need for power for EVs. As per a press release dated October 25, 2021, the organisation announced that it has successfully created a network of more than 1,000 public EV charging stations across nearly 180 cities and multiple state and national highways. TATA Power is also partnering up with various EV charger manufacturers to align with their project goal.

### **Magenta Power**

EV solutions and service provider Magenta is a new but significant player in the EV charging industry. The company has laid its network called ChargeGrid across the country. Recently, the company announced its plans to set up close to 4,000 charging stations in Maharashtra. The ChargeGrid stations are 24x7 functional and can cater to all kinds of EVs, including second-generation four-wheelers EVs.

### **Fortum**

Under the project name 'Charge & Drive,' Fortum is gradually expanding its network with its primary nodes based in Hyderabad. The Finnish company has entered India, making it the first country outside Europe to have a cloud-based network of power stations supported with an application. The global corporation recently partnered up with a home-grown company, Charge+ Zone.

### **Charge+ Zone**

Charge+ Zone is an EV charging station network company based out of Vadodara, Gujarat. The startup is a state government-recognised venture that got a seed funding of roughly Rs 2,220 crore by iCreate (International Centre for Technology and Entrepreneurship) under the aegis of the Gujarat Government. Currently, the company's network is 120-station large that also provides charging facilities to buses.

### **Ather Energy**

Ather is a company that manufactures e-scooters and developed the first electric 'intelligent' scooter manufactured in India, the Ather S340. The company is now working on setting up a widespread network of charging stations in the country. Ather, in September, grew its network to 200 charging units. The company has signed MoU with various companies to get access to locations for setting up charging stations.

### **ABB**

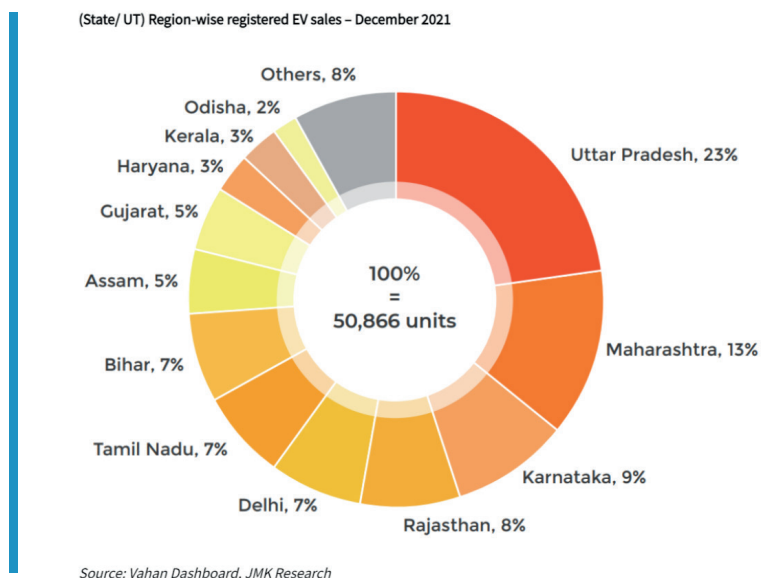
ABB is a multinational conglomerate with businesses spread in 40 countries, now including India. ABB provided charging solutions through supreme quality AC chargers and fast-charging DC chargers. The company recently launched the fastest EV charger in the world that has the capability to deliver 100 kilometres in three minutes.

### **EVRE**

EVRE is India's one of the leading integrated charging infrastructure companies. It follows Energy-as-a-Service (EaaS) model, offering public and fleet charging infrastructure in over 12 cities in the country. It operates over 700 charging stations in these cities with over 50 hubs as the company is working with the country's leading EV players like EDEL by Mahindra Logistics, Zyngo, LetsTransport, MoEVing, Park+, Meru and amongst others to support their fleets countrywide EV charging infrastructure. EVRE is working with Hiranandani and Mahindra Lifespace Developer to create India's largest EV-enabled residential and commercial townships. The company aims to delivery about 50,000 EV chargers by end of 2023.



## (State/ UT) Region-wise registered EV sales - December 2021



Source: [jmkresearch.com](https://jmkresearch.com)



## EV Podcast

### Accelerating Electric Mobility in Kerala

Kerala is continuously creating pathways to embrace electric mobility as a tool to promote shared mobility and clean transportation. The podcast covers how the Covid-19 lockdowns impacted mobility and the economy of the state and how Kerala expects to achieve its target of converting 1 million vehicles to zero-emission mobility within the next 3 years.

Listen to the podcast [here](#)

## COURTESY FOR THE ARTICLES

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## VIDEO CREDIT

Electric Bikes: A low carbon and healthy mode of transport: <https://youtu.be/OEZFT3gXBAU>

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## ABOUT WRI INDIA

WRI India is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity and human well-being.

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