



EVCONNECT

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NEWSLETTER

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FROM THE CEO'S DESK

Dear Friends,

The 24th issue of EVConnect, our monthly electric mobility focused newsletter, brings to you a conversation with Mr Dhiraj Agrawal (Senior Vice President & CEO, TW & EV Business, Manappuram Finance Ltd.) where he delves into electric vehicle financing in India. We discuss current roadblocks and measures the government can adopt to accelerate uptake as well as financing in the sector.

We also bring a host of news updates from national and global frontiers. In addition, we have also curated a feature on the importance of public outreach for scaling up electric vehicle adoption in India. Various developments are taking place in the electric mobility market, and it is often difficult to keep up with them. We hope this curated and compiled newsletter will come in handy to those who are seeking the latest information on electric mobility.

We hope you find this edition beneficial and share your thoughts so that we can improve further.



Sincerely,

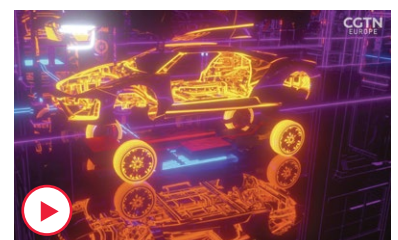
Dr. OP Agarwal
CEO, WRI India

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Presenting EV Connect Powertalk - exclusive monthly interviews with EV experts, policymakers and stakeholders discussing key insights. We also present one hand-picked video that showcases a global EV innovation.



Power Talk with Dhiraj Agrawal
Senior Vice President & CEO, TW & EV Business, Manappuram Finance Limited



Induction charging for electric cars. A cure for range anxiety?
Razor



POWERTALK

IN CONVERSATION WITH DHIRAJ AGRAWAL

Senior Vice President & CEO, TW & EV Business,
Manappuram Finance Limited

Interview taken by Amit Bhatt, WRI India

“As per industry estimates, electric two-wheelers and three-wheelers will be the front runners, mainly due to stringent norms, low price and last-mile connectivity.”

“If EV financing can come under the public banking (PB) guidelines, it would incentivize banks to increase lending.”

Interviewer: Manappuram Finance Limited is a leading non-banking financial company (NBFC) in the country, but can you tell me more about the group’s vehicle finance initiative?

Mr. Agrawal: We entered into the business of vehicle finance about six years ago. Today, our group caters to various divisions of vehicle financing for electric vehicles, two-wheelers, cars, commercial vehicles like trucks as well as vehicular equipment. I handle loan financing for two-wheelers and electric vehicles.

Interviewer: What is the current status of electric vehicle financing and what role does Manappuram Finance play?

Mr. Agrawal: When we started two years ago, most of the electric vehicle (EV) units were imported from China. There were only a few domestic manufacturers and original equipment manufacturers (OEMs) in this sector. We began by focusing on companies that were developing domestic EV products.

We all know that the demand for electric vehicles will grow in the coming years. As per industry estimates, electric two-wheelers and three-wheelers will be the front runners, mainly due to stringent norms, low price and last-mile connectivity. Also, due to COVID-19, many organisations are switching to EVs for the delivery of their products. Perhaps, this is the main reason we decided to enter into the business of EV financing, which is expected to grow to about 50 billion USD in the years to come.

Interviewer: What are the key issues, that you think Manappuram is facing, with financing EVs?

Mr. Agrawal: There are two key issues. The first one is battery production. Although many domestic manufacturers are coming into this field, many OEMs are still struggling to survive in the market. Second is, the quality, which is not up to the mark, and this is the main reason why most of the products are not very successful.

At Mannapuram, we decided that before selecting any OEM, we will look at their products and only then partner with them. Many big OEMs are not able to stay afloat in this pandemic. So, we need to see whether these OEMs can do business with us based on our requirements.

***Interviewer:* Are there any other issues that you see apart from this, that needs to be addressed for EVs?**

Mr. Agrawal: The other major issue which we are facing is the profile of the borrowers. Most of the borrowers are from the lower class or lower middle-class segments. As a financier, we do not find it very fruitful to lend money to customers who are not able to repay the loan.

***Interviewer:* What can the government do to facilitate financing along with removing some of these barriers you mentioned?**

Mr. Agrawal: As of now, the government is giving subsidies to EV customers. But, if this subsidy can be given to financiers like us, it will help us to grow. The government can also allow us to finance EVs under the priority sector lending (PSL) category. So, if EV financing can come under the public banking (PB) guidelines, it would incentivize banks to increase lending. As of now, there are hardly any nationalized banks that are into the business of EV financing. Thirdly, there is no secondary market for electric three-wheelers. A developed and formalized secondary market can improve the resale value of EVs and thus improve their bankability.

***Interviewer:* Of late, we are seeing a steady rise in fuel prices. Furthermore, given the pandemic context, there is a reluctance towards shared modes of transport. Given these two things, do you think there will be a greater uptake of electric vehicles in the coming days?**

Mr. Agrawal: As I said earlier, the electric vehicle industry will grow more than 25% to 35%. Currently, there are approximately 13 lakh electric two-wheelers on the road which will grow to 30 lakh in the coming years. Also, considering increasing petrol prices and air pollution, switching to an EV will not only save the environment but will also bring down traveling costs.

***Interviewer:* So, what can a research organisation, like WRI India, do to further the uptake and financing of EVs?**

Mr. Agrawal: WRI India can act as a bridge between the government and the financiers to understand and communicate the importance of subsidies that will help us in growing the EV financing business. The government should also work in establishing charging stations, which is very much required. Research organizations like yours are already helping them in developing charging stations which will definitely accelerate EV adoption. People will not purchase an EV if there is a lack of charging infrastructure. So, if all these issues can be taken care of, it will help businesses like ours to grow.



UPDATES FROM THE **WORLD**

In France, you could soon swap your old car for an electric bike | *Policy Initiative*

Summary of news: In a bid to reduce the number of cars on the road, France is encouraging the owners of old cars to hand over their vehicles for scrap in return for a 2,500 euro (\$2,975.00) grant to buy an electric bicycle. According to the French Federation of Bicycle Users (FUB), if the policy is adopted, the country will be the first in the world to offer people the chance to trade in an ageing vehicle for an electric or folding bicycle. [Read more](#)

Takeaways for India: Such policy initiatives and measures will play a crucial role in allaying apprehensions among the masses with regards to the adoption of electric vehicles. Formulating and implementing such financial initiatives will not only encourage EV adoption as mass transit but will also help in reducing carbon emissions along with boosting health outcomes.

Electric cars 'will be cheaper to produce than fossil fuel vehicles by 2027' | *Market Development*

Summary of news: Recent forecasts from BloombergNEF suggest that electric cars and vans will be cheaper to produce than conventional, fossil fuel-powered vehicles by 2027. Researchers predict that the falling cost of EV battery production, combined with dedicated production lines in manufacturing plants, will make electric vehicles cheaper than their conventional counterpart, irrespective of government subsidies. [Read more](#)

Takeaways for India: The Government of India aims to achieve 30% electric vehicle penetration in the transport sector by 2030. Technological advancements such as domestic battery manufacturing coupled with subsidies and tougher emissions can play a crucial role towards the greater uptake of electric vehicles.

Why solid-state EV batteries are gaining ground against lithium-ion batteries? | *Market Development*

Summary of news: Several automobile companies around the globe are now focusing on introducing solid-state batteries to extend the running range of electric vehicles without recharging. Many automobile giants like Toyota, Ford and BMW are already investing heavily in solid-state battery technology development to speed up the adoption of battery electric vehicles globally. [Read more](#)

Takeaways for India: Lack of charging infrastructure and range anxiety impact electric vehicle purchase decisions. To accelerate adoption, there is a growing need for better and improved battery technology that can help electric vehicle owners cover larger distances without the need to look for recharge options.



Israeli startup reveals compact motor for electric vehicles | *Market Development*

Summary of news: Israel-based startup EVR Motors has successfully developed and tested the first prototype of its lightweight and compact Trapezoidal Stator Radial Flux (TSRF) motor. The motor which is half the size of typical electric vehicle motors could lead to enhanced performance and lower production costs. The company noted that the new motors, when offered at low cost, outperforms induction motors in a similar price range. [Read more](#)

Takeaways for India: In a country like India, where the cost of an EV is a major barrier towards its accelerated adoption, such technological advancements can play a major role in encouraging uptake. Development of such small and light-weight motors for electric vehicles will not just improve performance but also reduce costs.

These Dutch cities will allow only zero-emission deliveries by 2025 | *Policy Strategy*

Summary of news: Cities in the Netherlands have decided to ban fossil fuel delivery vehicles in urban areas from 2025. The Netherlands' Environment Ministry noted an increase in delivery vans and lorries driving through cities and pointed out that if online deliveries continue with fossil-fuel trucks, emissions will increase by a third. The government is offering grants, of more than USD 5,900, to help businesses buy/lease electric vehicles with the goal of reducing one megaton of CO₂ emissions every year by 2030. [Read more](#)

Takeaways for India: EVs are gradually gaining traction not just because of benefits such as low maintenance and zero emissions; but also in terms of economic opportunity as realized and highlighted in [WRI India's Total Cost of Ownership \(TCO\) analysis](#). This can be attributed to the increase in the use of e2Ws for hyperlocal delivery and last-mile connectivity that results in longer vehicle running hours.

Ola EV cabs launched in London, company's first ever electric vehicle category | *Market Development*

Summary of news: Indian ride-hailing company Ola recently announced that it is launching a new electric vehicle category on its platform, which will allow riders in London to specifically book rides in a fully electric vehicle. The new category will be called Ola EV and will cost riders the same as the comfort category. The company is also offering a very attractive 0% commission rate, for the first three months on all electric rides, to its drivers. [Read more](#)

Takeaways for India: In a country like India, shared mobility could be a catalyst for furthering electric mobility. Such an initiative from a ride-hailing company can help transform Indian cities through sustainable, efficient, affordable and reliable mobility solutions.



UPDATES FROM INDIA

After two-wheeler, Ola Electric plans to make electric cars in India | *Market Development*

After foraying into the two-wheeler segment with the launch of a mega factory in Tamil Nadu to manufacture electric scooters, Ola Electric is reportedly planning to enter the four-wheeler segment with an indigenously built electric car. The car will be built on a born-electric skateboard platform and is expected to have a futuristic design. It will largely be a compact city car, with limited range, but will be made available at a very attractive price. Sources say that Ola Electric is looking to set up a global design centre for its electric car division in Bengaluru. [Read more](#)

Hero MotoCorp partners with Taiwan's Gogoro to launch electric scooter and battery-swapping stations in India | *Market Development*

Hero MotoCorp recently partnered with Taiwan's Gogoro to bring its battery-swapping technology to India along with collaborating on electric scooters. The joint venture, which will see the setting up of battery-swapping stations, is aimed at expanding India's goal of boosting the EV marketplace and making the move to sustainable mobility. As per the partnership, Hero MotoCorp will bring electric two-wheelers, based on Gogoro technology, under its own brand name with plans to go beyond India basis the success of the India launch. [Read more](#)

NITI Aayog suggests govt to provide incentives on EV purchase apart from subsidy under FAME-II | *Market Development*

The Government think-tank NITI Aayog is urging the government to provide incentives on electric vehicle purchase over and above the existing subsidy under the Faster Adoption and Manufacturing of Hybrid and EV (FAME-II) scheme. The think-tank has also said that the government should include EVs and associated businesses in the priority sector lending category. It further pitched for the creation of non-financial incentives, including priority lanes and exclusive parking for EVs in commercial complexes. [Read more](#)

Electric mobility takes centre stage in India's logistics business | *Market Development*

Electric vehicles are getting a major thrust in India especially when it comes to last-mile cargo delivery – i.e. the movement of goods from a hub to a customer's doorstep. About 2,36,802 electric vehicles were sold in FY2020-21,



of which 88,378 units were electric three-wheelers. A major chunk of these units was brought by e-commerce and logistics brands for cargo transportation. Mahindra Logistics, DHL, Amazon, and Flipkart have already made substantial investments to convert their cargo fleet to electric in the coming years. [Read more](#)

Indian standards for low-cost AC charging points for electric vehicles | *Policy Measures and Strategy*

As India scales its electric vehicle targets, issues related to pricing and electricity usage remain to be addressed. The Indian government recently released an official statement informing that Indian standards for low-cost AC charging points for electric vehicles will be released within the next two months with target prices starting as low as ₹3,500 for a charging unit. As per industry estimates, the charging units currently available for electric two- and three-wheelers are priced upwards of ₹10,000. [Read more](#)

PLI scheme to help India develop as a manufacturing hub for EV cells | *Policy Initiative*

The Government of India has recently approved a production linked incentive (PLI) scheme with an outlay of ₹18,000 crores to promote the manufacturing, export and storage of lithium-ion cells, essential for developing electric vehicles (EVs). If implemented successfully, the initiative will help India become a hub for EV manufacturing (and related components) in the coming decade thereby reducing the country's dependence on component imports. [Read more](#)

EV @ WRI

Webinar - EV Ready Streets and Buildings

To facilitate electric vehicle (EV) uptake, both the availability and convenience of charging need to be addressed. Access to public charging infrastructure, at strategic public locations, and enabling private charging infrastructure at residential/ office buildings is key for mainstreaming this transition. WRI India hosted 'EV Ready Streets and Buildings' discussed steps towards provisioning of charging infrastructure. Two panel discussions brought together experts and practitioners, from the public and private sectors, to reflect on a practical and implementable policy roadmap. View recording [here](#).





EV FEATURE

Public outreach is key for electric vehicle adoption in India

EV market penetration is only 1% of India's total vehicle sales. For EVs to find a place in our cities, tackling awareness at the individual level is of paramount importance.

by Noopur Patel and Amit Bhatt, WRI India | April 2021 | This article first appeared in [cnbctv18.com](https://www.cnbctv18.com)

The Central Government launched its Faster Adoption and Manufacturing of Electric Vehicles (FAME) in India scheme in 2015 to promote the manufacturing and adoption of electric vehicles. This was part of India's pledge in 2015 to reduce carbon emission intensity by 33-35% by 2030. Electric Vehicles (EV) are also an important tool to address air pollution as Indian cities struggle with air quality. A recent study by Swiss organization IQAir found that 22 of the 30 most polluted cities in the world are in India. In fact, the study also concluded that 14 in the top 15 cities are Indian.

Despite efforts from national and state governments in the last few years, EV market penetration is only 1% of India's total vehicle sales. There are many barriers to the slow uptake of electric vehicles like lack of charging infrastructure, vehicles' availability, high cost of financing, etc. However, one of the important issues which are often neglected is the public outreach for electric mobility.

Apart from devising tools to incentivize EV adoption, countries that have been able to motivate people to transition to EVs have focused on public outreach as a tool for EV uptake. These countries have worked on three key areas of EV awareness.

Creating the buzz

The Energy and Resources Institute (TERI) study identified the lack of awareness regarding EVs, their benefits, cost, and operation as one of the significant barriers affecting EV adoption in India. For EVs to find a place in our cities, tackling awareness at the individual level is of paramount importance. This month, the Canadian government launched the 'Zero Emission Vehicle Awareness Initiative' to stimulate more adoption through education and capacity-building activities. Similarly, EV outreach campaigns worldwide have aided the expansion of public awareness and comfort with EV technology. It is seen that policymakers must form partnerships and collaborations with multiple stakeholders in the EV ecosystem to reach a wider group to inform and sensitize.

Bridging the policy formulation and end-users gap

Any successful public behaviour change can be achieved and sustained through continuous engagement, dialogue, and discussion between the government and end-users. Despite any policy being strong in design, its implementation is bound to face challenges. To overcome these and build public trust, continuous engagement with stakeholders to discuss and understand these challenges is key to achieving the targets as defined in the policy. Therefore, for any EV policy to deliver the kind of impact the government wishes, establishing a connection between the government and end-users of the policy can help overcome any resistance they might harbour in switching to EVs. For example, to raise public awareness of EVs in British Columbia, several partners, including the government, launched a public outreach campaign called "Emotive - the Electric Vehicle Experience".

Dedicated Channel for Communication

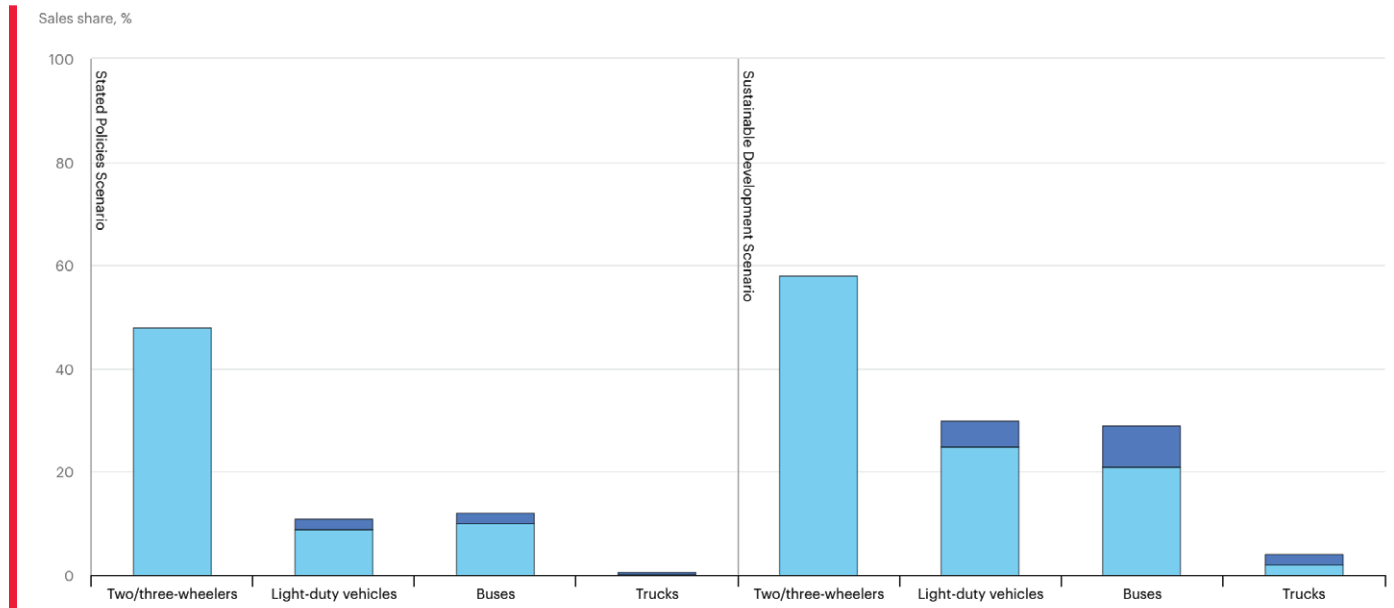
While focusing on awareness is prime to accelerate EV uptake by informing and educating the public, outreach campaigns must also emphasize setting up a dedicated channel for the public to communicate with the policymakers to overcome resistance and help build trust. This channel should act as a grievance redressal platform that connects the user to the body in charge of resolving queries and addressing any challenges. Social media has been used widely to act as a bridge between users and policymakers and help adopters in India. A consolidated one-stop solution for all things EV that collates relevant information that a consumer might require, including provisions of the policy, an EV model list, the location of charging points, among others, can help address the information gap.

EV uptake in India needs a dedicated focus on a public outreach that will be critical to resolving doubts, addressing grievances, engaging in continuous consultations, building trust, and strengthening its resolve to achieve targets.

The Delhi government took a step in the right direction by launching the Switch Delhi campaign. The campaign targets specific vehicle segments, RWAs, corporates, youth, etc to sensitize them to the benefits of EV and how the Delhi EV policy has provisions for each of these segments to increase these zero-emission uptake vehicles. The eight-week campaign's outcome can be good learning for Delhi and the rest of the country.

Electric vehicle share of vehicle sales by mode and scenario in India, 2030

Visit source page [here](#)



Source: IEA Global EV Outlook 2021



EV Podcast

Electric vehicles powered by farm waste

The podcast focuses on twins Nikita & Nishita from Bhubaneswar, who are looking to disrupt the lithium-ion battery sector. The duo has invented a battery with the same energy density as lithium-ion but powered by farm waste. Their peptide crystal batteries get charged 8 times faster than Li-Ion in lab conditions. If this technology takes off, it could address the sustainability challenges of electric mobility globally.

Listen to the podcast [here](#)

COURTESY FOR THE ARTICLES

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VIDEO CREDIT

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ABOUT WRI INDIA

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