

SMEV BUZZ

THE FUTURE IS ELECTRIC

ROADMAP TO REALIZING INDIA'S GREEN ENERGY POTENTIAL

India's Energy Transition -
Looking Beyond the Budget

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SMEV BUZZ is a quarterly newsletter by the Society of Manufacturer's of Electric Vehicles. Through this newsletter, SMEV aims to promote the cause of electric vehicles by apprising its readers with recent events in the industry. This newsletter also acts as a platform for EV stakeholders to voice their opinions and views about the industry. Readers are requested to note that no part of the publication may be reproduced or transmitted in any other form or in whole without the written permission of the publishers. The opinions and views expressed within this newsletter are not necessarily of the publishers. The publishers do not take the liability of the errors or omissions in this issue.

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सत्यमेव जयते



भारत 2023 INDIA

Message

The Group of Twenty or G20 is the premier forum for international economic cooperation and plays an important role in shaping and strengthening global architecture and governance on all major international economic issues. India holds the presidency of the G20 from 1 December 2022 to 30 November 2023.

India will assume G20 presidency when there is a global turmoil. There is a major challenge because of climate crisis, slow sustainable development goal (SDG) implementation, Owing to covid, 200 million people who suffered job losses; 100 million have been pushed into extreme poverty; and there have been disruptions in global supply chains. Achieving SDGs and climate pledges will have to be backed by finance, especially for the global south, who will feel the brunt.

India's G20 presidency will seek to advocate oneness of all, and this is reflected in our theme 'One Earth, One Family, One Future'.

The challenges confronting the global community can be solved only by collective action and the focus should be on those whose need is the greatest.

The world is facing a vast number of challenges, and the Sherpas will have to shape an inclusive future, for which India is ready to share its experiences in key areas such as use of digital tools and financial inclusion initiatives.

Our Hon'ble Prime Minister has said that India's presidency would be inclusive, ambitious, action-oriented and decisive. Your support will be crucial in this endeavour. Therefore, we would like the positive and forward-looking support from all of you to make the G20 a very vibrant, dynamic and positive group to drive global growth, global sustainability and digital transformation.

Green mobility revolution is really knocking on our doors, whether we like it or not, and India's focus has to be on shared, connected and an electric transportation movement.

I am a believer that India's electrification journey is to be about two-wheelers and three-wheelers.

It has to be two-wheelers and three-wheelers because 80 per cent of the total sales of vehicles is really about two-wheelers and three-wheelers in India right now.

In the next four years, India must target 100 per cent electrification of two- and three-wheelers as these segments will lead the country's green mobility revolution.

I must convey my best wishes to the SMEV Members, who are actively contributing in this revolution and congratulate the SMEV BUZZ Team, for this G20 Special Edition.

(Amitabh Kant)

Place- New Delhi
Dated- 10/01/2023

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PRESIDENT'S MESSAGE

Roadmap to realizing India's Green Energy potential

India is the world's fifth-largest economy and one of the fastest-growing countries. It's on a mission to transition to a green and sustainable future, and electric vehicles (EVs) are an essential component of this vision. With its vast population, rising urbanisation, and increasing air pollution, India must take bold steps to harness its green energy potential and transition to clean mobility.

To realize this vision, India needs a comprehensive roadmap that outlines clear steps and targets to accelerate the adoption of EVs. Here are some key elements of such a roadmap:

To address these environmental challenges, India needs to focus on realizing its green energy potential. This means developing a roadmap that outlines a clear path towards a sustainable future. Here are some steps that we as a country can take to achieve this goal:

1. Increase the use of renewable energy: India has made significant progress in the development of renewable energy sources such as solar and wind power. However, there is still a long way to go to meet the country's energy needs through renewable sources. The Government can incentivize the adoption of renewable energy by offering tax benefits and other incentives to companies and individuals who invest in these sources. The Indian Government has set ambitious targets to achieve 450 GW of renewable energy by 2030. To achieve the goal of 450 GW. The Government is focussing on building power transmission lines and grids that can handle renewable energy. India has already started working on this, and initiatives like the Green Energy Corridor project are already underway.



2. Encouraging EV manufacturing and adoption through incentives: The Government is already offering financial incentives such as tax exemptions, subsidies, and low-interest loans to promote EVs' purchase under its FAME-2 scheme, which has been a success, and has led to huge adoption of EV's in the country. In addition, the Government is also providing PLI scheme incentives to manufacturers to encourage domestic production of EVs. We expect this support from the Government to continue for few more years which will help in even furthering the cause of mass adoption of EV's

3. Building a robust charging infrastructure: One of the significant barriers to EV adoption in India is the lack of charging infrastructure. Therefore, India needs to invest in building a robust charging network that can cater to the growing demand for EVs. The Government has already announced plans to install 2.7 million public charging stations by 2030, but more needs to be done to ensure that these targets are met.

4. Encouraging the use of renewable energy sources: Electricity is the primary source of energy for EVs, and India needs to move towards using renewable energy sources such as solar, wind, and hydropower to charge these vehicles. This would not only reduce the country's carbon footprint but also reduce the cost of charging.

5. Implementing policies to phase out fossil fuel-powered vehicles: To realize the full potential of EVs, India must implement policies to phase out fossil fuel-powered vehicles. The Government is introducing regulations that gradually reduce the number of new fossil fuel vehicles sold in the country, thereby encouraging people to switch to EVs.

6. Encouraging the use of EVs in public transportation: India has one of the largest public transportation systems in the world and encouraging the use of EVs in public transportation can have a significant impact on reducing carbon emissions. The Government is already offering subsidies under its flagship policy FAME-2 to public transport operators to purchase EVs and provide charging infrastructure for these vehicles. However, more can be done to further increase the penetration of public transport systems in across the country.

In conclusion, realizing India's green energy potential requires a concerted effort from the Government, businesses, and individuals and society as a whole. By focusing on renewable energy, sustainable agriculture, public transportation, green technologies, natural resource protection and public education, India can create a sustainable future that benefits both people and the environment. The roadmap to achieving this goal will require collaboration and innovation, but the rewards at the end, are well worth the effort!

Naveen Munjal

President,

Society of Manufacturers of Electric Vehicles (SMEV)



Shoonya – Zero Pollution Mobility is a consumer awareness campaign launched by NITI Aayog, aimed at reducing air pollution by accelerating the adoption of electric vehicles (EVs) for ride-hailing and deliveries in cities. The Shoonya campaign has three main components that incentivise the efforts made by corporate partners, raise consumer awareness, and provide detailed insight into the EV landscape of India.



Corporate branding programme



Consumer awareness drive



Resource toolkit

Why Shoonya?

Switching to zero-emission vehicles presents an opportunity to meet India's growing transportation while providing several benefits such as:



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Cost savings:

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NITI Aayog

For more information, visit www.shoonya.info
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Gagan Sidhu

Director, CEF
Council on Energy, Environment
and Water



India's Energy Transition - Looking Beyond the Budget

India is in the midst of an energy transition that comprises three sub-transitions. The first is the power sector sub-transition, which is a shift away from traditional sources of electricity generation to renewable energy (RE)-based generation such as solar and wind. The second is the mobility sub-transition, which is a shift away from internal combustion engine (ICE)-based mobility to electric mobility (EV). The third is the industrial sub-transition, which is a shift from fossil fuel-based industrial processes to those powered by clean and green fuels such as green hydrogen. These three sub-transitions will require significant amounts of investment – a report by the Council on Energy, Environment and Water (CEEW)'s Centre for Energy Finance (CEEW-CF) estimates they will need USD 10.1 trillion for India to achieve net zero by 2070.

The finalisation of the Union Budget is thus an important annual exercise and there were several announcements in Budget 2023-24 that have a direct bearing on India's energy transition. However, the scale of India's ambitions and the speed at which they are being pursued means that what takes place outside the ambit of the Budget is just as important as what is proposed in it. The three months that have ensued since the Budget was presented have not disappointed, with several developments coming in this brief period.

From the mobility sector sub-transition perspective, FY 2023 saw EV volumes grow over 2x compared to FY 2022 and cross the 1 million mark for the first time in any FY. Localisation of supply chains is significant lithium reserves discovered in Jammu & Kashmir (UT) can be expected to inspire confidence in the minds of investors looking to deploy capital towards this end.

Finally, from the perspective of the industrial sub-transition, there is expectation of measures that build on the recently approved National Green Hydrogen Mission that targets 5MMT per annum production capacity by 2030. Several measures appear to be under consideration, including an extended window for exemption from ISTS charges for RE projects set up for green hydrogen production, as well as incentives for green hydrogen production that may be allocated via auction. Such moves could align well with the Green Hydrogen Mission.

Even as the energy transition gathers pace, the question remains as to what exactly needs to be done to ensure that we achieve both our nearer term 2030 targets for RE and green hydrogen, as well as longer term 2070 net zero ambition. There are five key considerations that may be kept in mind as highlighted in a previous article.

First, acknowledge that the financing challenge is real. While a majority of capital requirements from both a 2030 as well as a 2070 net-zero perspective can be raised from conventional sources, a financing gap remains.

Second, there is a need for differentiated intervention. The three sub-transitions are at different phases of evolution and require different kinds of interventions.

Third, treat the investment challenge as an opportunity. For example, the recent issuance of sovereign green bonds can catalyse the tepid corporate green bond market, and even lead to the emergence of India as an international green finance hub.

Fourth, design a transparent and level playing field. A classification system, or taxonomy, which allows all stakeholders to uniformly determine green, climate or sustainability-related attributes of businesses and investments is critical.

Fifth, create a broader market for carbon credits. This will act as a system of nudges and rewards as decarbonisation will not evolve in a uniform manner at the ground level.



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Rajnish Gupta

EY India Tax and Economic Policy
Group Associate Partner



Supply Chain and Power Sector Challenges for India's EV Revolution

India has emerged as the world's fastest-growing large economy and its policymakers now face the challenge of balancing the needs of a growing population with the imperatives of fighting climate change. To ensure sustainable development India is incentivising adoption of green technologies including electric mobility. According to NFHS-5 only 1 in 12 (8%) households own cars¹. This means many households could even buy EVs as their first car in the coming decade. However, for speedy adoption of EVs, sufficient charging infrastructure powered by decentralised green energy systems and development of the supply chain are extremely important.

Large scale adoption of EV would require India to develop the supply chain for batteries, which account for approximately 40% of the electric vehicle cost. The challenge for India is that it does not have access to critical minerals like lithium, nickel, cobalt etc. which are used in making the popular Li-ion cells. India also lacks the infrastructure and technologies to process these mineral ores into high-grade battery-worthy ingredients. Much of the battery supply chain (as per IEA² 60-70% of material processing and 70-80% of cathode and anode cell components) is concentrated in China making their EVs a lot more affordable in comparison. Since the EV battery and other key components have to be imported,

this represents a risk for India as with widespread adoption, import bill on this account can balloon.

Presently, India is in early stages of developing scale for manufacturing of EV components and semiconductors, which are used extensively in EVs. To overcome these lacunae, the Government of India has launched PLIs to boost ACC batteries, auto components and semiconductor manufacturing. Such initiatives should certainly boost the EV manufacturing ecosystem in the coming years. Indian policy makers could also consider incentivising cutting-edge R&D activities in new battery chemistries and EV components using easily available minerals and allowing for the emergence of scale.

To secure critical minerals like lithium from abroad, India has created KABIL but any major breakthroughs have not been reported as yet. India also recently reported the existence of deposits of lithium in the Jammu region. However, it's too early to comment on the level of reserves that can be commercially extracted in an economically viable manner.

Need to continue with demand and supply-side incentives for scale

Given the constraints in technology, battery raw materials and EV components, leading to risk of high import dependencies and potential cost pressures in the near-term, supply side incentives would be required for large scale adoption and for scale to emerge. India also needs to forge closer ties with countries like Australia and Japan for access to battery raw materials and technology, respectively. On the demand side, the FAME-type incentives need to continue. Similar support has been announced by the US (Inflation Act tax credits of up to \$7,500 for EVs) and EU countries. China also provided incentives running into billions of dollars to its

¹ Only 8% Indian families own cars, NFHS finds. Over 50% still use bicycles, bikes & scooters (theprint.in)

² Global Supply Chains of EV Batteries (IEA)

local EV industry between 2010 and 2022 which were withdrawn only in 2023³ when the industry had scaled up, and the share of electric cars in China's domestic car sales had reached 29% in 2022⁴.

Green energy will be crucial for making EV adoption a climate success

Much of the power produced in India comes from fossil fuels. If EVs are charged using energy generated from burning fossil fuels, that would defeat the purpose of reducing CO2 emissions through adoption of electric

mobility. The Indian government has taken proactive steps to promote the generation of green energy, but some further power sector reforms may be needed. Financially strained state-owned distribution monopolies could be a constraint in transitioning to a greener power supply. Initial state support and power sector reforms would also be crucial for developing an effective EV ecosystem which can support India's EV revolution and enable it to meet its climate goals.

**Article co-authored by Gagan Sharma,
Manager with Tax and Economic Policy Group at EY**

³ Tesla, EV rivals absorb costs after China pulls plug on subsidy | Reuters

⁴ Global EV Outlook 2023: Catching up with climate ambitions (IEA)

The article reflects the personal views of the authors.



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Sanjay Dube

Chief Executive Officer,
International Institute for Energy
Conservation



Need for Creating Skilled EV Workforce for Enhancing the Trust on Electric Vehicles

The Government of India (GoI) has highlighted electric mobility as one of the main development sectors. Considering this, several policies and regulatory steps have been implemented to encourage the use of electric vehicles, as well as increasing emphasis on creating green mobility solutions. The Government of India's National Electric Mobility Mission Plan 2020 (NEMMP) prioritises national energy security, tackles the environmental implications of road transport vehicles, and promotes local manufacturing capabilities for electric cars. The GoI has set a target of not less than thirty percent new electric cars being sold by 2030. Several strategies and initiatives have been proposed to increase EV manufacturing and demand.

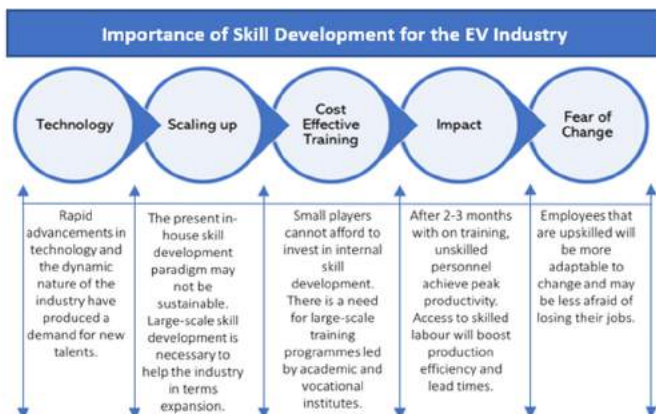
Automobile industry contributes to 7.1% to India's GDP and 49% to industrial production (DPIIT, n.d.). The automobile industry, which has fuelled India's prosperity, is now on the cusp of an Electric Vehicle (EV) transition. EV demand in India is expected to surpass 102 million units in FY 2021-2030 (NITI Aayog & RMI, 2021). According to the Automotive Mission Plan 2016-2026, a vision statement prepared by the Government of India and the Indian Automotive Industry, 65 million direct and indirect employment would be created in 2016-26. (2015) (GoI & IAI).

India's journey in the past decade towards electric mobility has been remarkable. While the government and private sector have done commendable work, the Indian ecosystem has been plagued by several challenges.

OEMs and automakers have grappled with difficulties like the battery life, charging infrastructure, market preparedness, and trained labour availability. In India, the productive age group of 15-65-year-olds made up 64% of the population in 2011 (MHA, 2011) and will make up 68% by 2026. Only 10.8% of India's workforce are now equipped with any form of skilling. Only 8.6% of the workforce received informal skill training, while only 2.2% received formal skill development (MoSPI, 2015). At a time when China has 24% of its workforce educated and South Korea has 96% (Shukla et al, 2015), India must ramp up its skilling efforts or risk squandering the country's EV revolution.

EV stakeholders are now increasingly focusing on the accessibility of qualified and skilled employees capable of developing, testing, designing, and maintaining EVs based on cutting-edge, complicated technology. Besides, automobile technology, EVs require cross-sectoral technological integrations such as Information and Communication Technologies, Artificial Intelligence, Power flow studies and RE-EV grid integration. This inherently requires understanding of key tools such as MATLAB, Simulink, ANSYS, and others augmenting EV specialisations such as Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA), Computational Design, and Multibody Dynamics. At the same time besides engineers, EV sector would also require skilled and semi-skilled labour/technicians for providing downstream support needed for Roadside Assistance / Local maintenance and repairs. This will ensure that the consumers' trust in EVs is brought at par with the ICE vehicles.

Furthermore, young professionals require mechanisms that can combine comprehensive coursework with a more practical, hands-on learning experience, allowing the workforce to gain deep insights and practical knowledge of what goes into building, operating, and maintaining an electric vehicle as well as charging infrastructure. India must not only prepare a workforce for an EV-dominated future, but also upskill its current workforce to maintain its relevance once internal combustion engine (ICE) automobiles are phased out.



Innovative Research Initiatives Pvt. Ltd. (IRIPL) has conducted a study that analyses the links between EVs and the need for skilled workforce. It also provides statistics and a strategy for transitioning the current workforce trained in Internal Combustion Engines (ICE), to EVs.

Although some components and methods are shared by ICE and EV, the skill sets are not necessarily interchangeable. As a result, a well-targeted skilling plan to prepare the workforce for the EV transition is vital. From better organised apprenticeship programmes to regulating and standardising the amount of skill training provided, India has a long way to go before it can adequately leverage on the EV boom. The report makes actionable recommendations for India to maintain its manufacturing excellence while reducing employment losses as it transitions from ICE technology to EV.

As per the analysis, the predicted employment figures for OEM production, auto component manufacturing, and vehicle maintenance, which includes both approved service facilities and roadside mechanics, would climb from 8.39 million in 2022 to 11.88 million in 2030. Furthermore, the current automotive skilling infrastructure is severely constrained and incapable of meeting the industry's growing need for qualified people.

Consultations with various stakeholder resulted the following challenges that are presently hindering the development of EV skills:

1. Lack of training programme awareness and availability: many individuals are unaware about the EV and associated training programmes.
2. Absence of standard training curriculum for unskilled/semi-skilled workers such as drivers, roadside assistance, roadside mechanics, and so on.
3. Women engagement is limited: The transport business is dominated by men, with little prospects for women participation.
4. Because EV is a new technology, there are few industry standards for job roles, curricula, training approaches, and so on.
5. With only 1.3 percent of total vehicle sales in India in FY 2020-21 (Saur Energy International Magazine, 2021), the EV business is still in its infancy and therefore unable to attract the multi-stakeholder performing comprehensive plan to building capabilities.

6. Limited industry support: The Indian EV sector is driven by a few smaller enterprises that lack the means to fund large-scale skill development programmes.

Identified GAP in Workforce:

Sub-sectors of Automotive Industry	New Opportunity	Reskilling Opportunity
Research & Development R&D and Manufacturing (OEM, Auto Component Manufacturers, Raw Material Suppliers)	Mechatronics Technician	Machining
	Electronics Technician	Maintenance (Mechanical and Electric)
	Automation and Robotics Engineer	Automotive Test Technician
	Equipment Maintenance Technician	Welding
	Automotive Data Analyst	Vehicle and Component Assembly
Dealership Sales	Home Sales Consultant	Sales Consultant
	Sales Consultant Digital Marketing	
	Digital Content Writer	
	E-Outlet Sales Consultant	
Automobile Service OEM Authorized Service Centres and Private Garage Technicians)	Auto Expert Technician	Service Technician
	Advance Paint Technician	
	Battery Technician	
	Electric Vehicle Technician	
	Predictive Analyst	
Road Transport - EV Charging Station	Charging Attendant / Station Supervisor	
	Car Washer / Tyre Inflator / Punctures Repair	
	Field Failure Analysis Engineer	
	Customer Support Engineer	
Road Transport (New Skills required by Commercial Vehicle and Cab Drivers as a complementary skill to driving)- EV Charging Station	Hospitality	
	Loading / Unloading	
	Handling Hazardous Materials	
	Basic Mechanics	
	Tablet Computer Training	
	Financial Management	
	Vehicle Detailing	
	Self-motivation Training	
	Transportation Management Training	

Recommendations

1. Further studies should be conducted to assess the skills of existing workforce to support the preparation of focussed training programs for skilling, upskilling and reskilling to avoid any future impact on their livelihoods.
2. More focus should be given to upskilling of workforce rather than skilling new workers.
3. Increased assistance from both public and private sector to nurture the creation of specialist and scalable opportunity.
4. Increased number of collaborations between various stakeholders to develop adaptive skilling and education programmes.
5. Electric mobility should be promoted as a key career option.
6. EV transformation should develop an inclusive and diverse workforce.
7. To accelerate the transformation of market, the institutes, OEMs, and others should focus on short-term courses, vocational training, and apprenticeship programmes, which would be faster and more feasible compared to formal university education.



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BAAS – Way To Go For Indian Market

Background: The Indian market for 2-wheeler and 3-wheeler EVs is set to experience rapid growth in the coming years. With increasing environmental concerns and government initiatives to promote electric mobility, there has been a significant shift in consumer behaviour towards eco-friendly transportation options. The Indian government has set an ambitious target to achieve 30% electric mobility by 2030. To support this goal, several initiatives have been introduced, including subsidies, tax incentives, and favourable policies for EV manufacturers. This favourable support system is leading the continuous increase in the demand for electric 2-wheelers and 3-wheelers in India, both in urban & rural areas. Added with rising fuel costs and growing awareness about the environmental impact of gasoline-powered vehicles, consumers are increasingly opting for EVs. Apart from these two factors there are few other factors pushing the EV demands in India such as:

- **Increasing affordability:** The cost of EVs has been decreasing, making them more affordable for consumers. Additionally, several Indian manufacturers have started producing affordable electric scooters and bikes, which are expected to further drive demand.
- **Growing Middle Class:** Being most populous country on earth, with a growing middle class and a rapidly expanding urban population, no wonder India has the world's largest & fast expanding market of electric 2-wheelers and 3-wheelers. According to a report by ResearchAndMarkets.com, the Indian market for electric 2-wheelers and 3-wheelers is expected to grow at a CAGR of over 40% from 2021 to 2026. The report also

projects that the number of electric 2-wheelers and 3-wheelers sold in India could reach over 6 million units by 2026.

Present Situation: Unfortunately, despite the favourable market conditions and government support, the growth of the electric 2-wheeler and 3-wheeler market in India is not without challenges. The lack of charging infrastructure and the limited range of EVs remain key challenges that need to be addressed to accelerate the adoption of EVs in India. Apart from above favourable conditions as well as associated challenges, the main deterrent in growth of EV market is because of high cost of batteries which typically determines the cost of electric 2-wheelers and 3-wheelers. Typically, batteries account for a large portion of the overall cost of an EV, with the cost of the battery pack ranging from 30% to 50% of the total cost of the vehicle. However, the cost of batteries has been steadily declining in recent years, thanks to advancements in technology, economies of scale, and increased competition among battery manufacturers. As a result, the cost of EV batteries has dropped by nearly 90% over the past decade, making EVs more affordable and accessible for consumers.

In India, the cost of electric 2-wheelers and 3-wheelers is also affected by government subsidies and incentives, which can significantly reduce the overall cost of the vehicle. For instance, under the FAME II (Faster Adoption and Manufacturing of EVs) scheme, the Indian government provides incentives for the purchase of electric 2-wheelers and 3-wheelers, which can range from Rs. 5,000 to Rs. 50,000, depending on the type and

model of the vehicle. For instance, under the FAME II (Faster Adoption and Manufacturing of EVs) scheme, the Indian government provides incentives for the purchase of electric 2-wheelers and 3-wheelers, which can range from Rs. 5,000 to Rs. 50,000, depending on the type and model of the vehicle.

Way Forward: While batteries do contribute significantly to the cost of electric 2-wheelers and 3-wheelers, declining battery costs and government incentives are helping to reduce the overall cost of these vehicles, making them increasingly attractive to consumers. Yet, despite the declining cost of batteries and government incentives, electric 2-wheelers and 3-wheelers are still more expensive than their gasoline-powered counterparts.

The cost of battery and the problem of charging are two of the most significant challenges facing the widespread adoption of electric 2-wheelers and 3-wheelers. While the cost of batteries has been declining steadily, the problem of charging infrastructure remains a significant hurdle for the growth of the EV market in India. The challenge of charging station is also linked to few other factors, not associated with EVs such as power demand management, grid balancing and also managing energy mix of energies (Coal, hydro, nuclear, solar, wind etc.)

In many parts of India, the lack of charging infrastructure as well as poor power structure is a major barrier to the adoption of electric 2-wheelers and 3-wheelers. While there are some charging stations in urban areas, the coverage is limited, and the infrastructure is still inadequate to meet the demand for charging EVs. This is a significant problem for consumers who rely on their EVs for daily commutes and need access to reliable and convenient charging facilities.

Moreover, charging time for batteries remains a significant concern for consumers. The charging time for EV batteries is much longer than the time it takes to fill a gasoline tank, which can make long-distance travel more challenging. Currently, most electric 2-wheelers and 3-wheelers in India take between 4 to 8 hours to fully charge, depending on the battery capacity and the type of charger used.

To address these challenges, the Indian government has taken several initiatives to promote the development of charging infrastructure across the country. Under the FAME II scheme, the government has allocated funds to set up charging stations in public places, such as shopping malls, airports, and parking lots, to improve the accessibility of charging facilities for EV users. Moreover, some companies are developing innovative solutions to address the charging problem, such as portable chargers and swappable batteries. These solutions offer more flexibility for EV users, allowing them to charge their batteries on-the-go or swap batteries at designated stations. While the cost of battery and charging infrastructure remain significant challenges, the Indian government and private companies are taking steps to address these issues. The continued development of charging infrastructure, along with advancements in

battery technology, will be crucial to driving the widespread adoption of electric 2-wheelers and 3-wheelers in India.

It is at this point BaaS (Battery as a Service) comes into picture & plays an important role in pushing this transition from ICEV to EV. BaaS is a relatively new business model in the EV industry that offers batteries on a lease, which can help solve the challenges associated with the cost of batteries and charging infrastructure. Under the BaaS model, the cost of the battery is shifted from the vehicle owner to a financial institution, which owns and maintains the batteries. Vehicle owners pay a monthly fee for the use of the battery & associated energy, which is similar to a leasing arrangement and significantly reduces the upfront cost of the EV, making it more accessible and affordable for consumers. BaaS also eliminates the need for individual chargers, as the battery can be swapped at designated charging stations. This is particularly useful for people living in high-rise buildings or multi-storey houses in metropolitan areas, where access to charging infrastructure may be limited or impractical. BaaS can also help improve the utilisation of green energy and manage peak hour demand on the power grid. The batteries can be charged during off-peak hours, when the demand for electricity is lower and the cost is cheaper, and then used during peak hours when the demand is higher. This can help reduce the strain on the power grid during peak hours and increase the utilisation of renewable energy sources. On another side, BaaS offers additional benefits such as controlled battery monitoring and maintenance by a trained agency, & extending the life of the battery, reduce the risk of battery failure. Additionally, BaaS can provide a more flexible and scalable solution for EV users, as the battery capacity can be adjusted based on the individual needs of the user. BaaS offers a more affordable and accessible option for consumers, eliminates the need for individual chargers, and improves the utilisation of green energy while reducing the strain on the power grid. As the EV market continues to grow, BaaS is expected to become an increasingly popular business model, providing a more sustainable and cost-effective solution for the future of transportation.

While BaaS offers many potential benefits for the EV industry, there are also several challenges which include financial inclusion, battery standardisation, government mandates, battery quality and safety monitoring, manning and safety of BaaS setups, and proper fitment of batteries in vehicles. Some of these challenges & their associated risks are listed below:

a. Financial Inclusion - One of the main challenges of BaaS is about who must bear the risk of its installation cost. Financial institutions are generally reluctant to invest in BaaS as they do not see a reliable return on investment, which limits the availability of the service for consumers.

b. Battery Standardisation - Standardising batteries is a big task, as OEMs globally have not cooperated in this regard. Currently, it the vehicle design which decides the battery size & battery pack are designed to fit in the assigned spare available in the specific vehicle models. If batteries were to be standardised, OEMs would need to

design their vehicles around the battery sizes, which could limit flexibility in design changes.

c. Government Mandates - There are challenge with governments which restricts them to mandate specific battery sizes or types for any EV as it may risk alienating OEMs and limiting innovation in the EV industry.

d. Monitoring Battery Quality and Safety - Ensuring the quality and safety of the batteries is critical for the success of BaaS. Battery degradation, aging, and energy capacity need to be monitored closely to ensure that the batteries are safe and reliable.

e. Manning And Safety of Baas Setup - Operating a BaaS setup requires trained personnel to manage battery swapping and maintenance. Proper training and safety protocols must be implemented to ensure the safety of the personnel and consumers.

f. Proper Fitment of Battery in Vehicles - Proper fitment of batteries in vehicles is crucial to avoid any untoward incident under high vibration requiring careful engineering and testing to ensure that the batteries are securely and safely installed in the vehicles. It is one of biggest challenge for BaaS where any wrong fitment could lead to a fatal accident.

While BaaS offers many potential benefits for the EV industry, it also faces several challenges that will get addressed as the industry & EVs as products get evolved. Addressing these challenges will require collaboration between all stakeholders, including OEMs, financial institutions, governments, and technology providers.

The implementation of BaaS is still in its early stages in India, and regulatory frameworks are yet to be established. However, there have been some positive developments in this regard. In December 2020, the Ministry of Road Transport and Highways issued a draft notification proposing to amend the Central Motor

Vehicles Rules to include provisions for BaaS. The proposed amendments include guidelines for leasing, battery swapping, and safety standards for EVs operating under BaaS.

In addition, some state governments have taken initiatives to promote BaaS. For example, in 2019, the government of Telangana launched an EV policy that includes incentives for the adoption of EVs, including BaaS. The policy aims to create a supportive ecosystem for EVs and make Telangana a hub for EV manufacturing and innovation.

Conclusion:

The future of BaaS in India looks promising, with several key players entering the market. Lithion, Sun, and Battery Smart are among the leading BaaS providers in India. Lithion has partnered with multiple OEMs to provide BaaS services for their EVs, while Sun and Battery Smart are focused on developing battery swapping infrastructure to support BaaS.

The overall market for BaaS in India is expected to grow rapidly in the coming years. According to a report by Niti Aayog, the demand for BaaS in India is projected to reach 25-30 GWh by 2025 and 50-60 GWh by 2030. This presents a significant opportunity for BaaS providers to establish themselves in the Indian market and contribute to the growth of the EV industry.

In conclusion, while the regulatory framework for BaaS is still evolving in India, the future of this model looks promising. With key players entering the market and the demand for BaaS expected to grow rapidly, BaaS has the potential to play a significant role in the transition to a greener and more sustainable transportation system in India.

**Article co-authored by Prabhat Khare,
EVP-Lithion Power Private Limited**

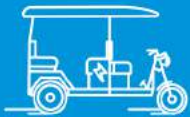


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Web : www.rotodrive.com

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SMEV ACTIVITIES

SMEV, SG Mr. Ajay Sharma addressed the 11th Green Energy Summit 2023, organised by the Indian Chamber of Commerce in New Delhi.

He also received a Memento from Shri Anil Razdan, Fmr. Secretary Power, on the occasion.

Friday, Feb 24, 2023

India Habitat Centre, New Delhi

The 11th Energy Green Summit was attended by 100 participants from the Indian Energy sectors as well as key international delegates.





Shri Satish Updhay,
Hon'ble Vice Chairman,
NDMC was presented
with SMEV Buzz, a
quarterly magazine by
SMEV, SG Mr. Ajay Sharma.

Friday, Feb 24, 2023
NDMC, New Delhi



SMEV, SG Mr. Ajay Sharma actively participated & addressed the EV Car Rally, organised by the PHD Chamber of Commerce & Industry in New Delhi.

The rally witnessed active participation from the electric vehicle enthusiasts.

Friday, Mar 10, 2023
PHD House, New Delhi

PHD Chamber of
Commerce & Industry
officials presented SMEV,
SG Mr. Ajay Sharma with
the EV Car Rally Memento,
as a token of gratitude.

Friday, Mar 10, 2023
SMEV Office , Gurugram

SMEV participated to showcase support and
gratitude for successfully organising EV Car
Rally to promote Carbon Neutral Future.



The Arcelor Mittal Nippon Steel Team met SMEV, SG Mr. Ajay Sharma in New Delhi.

Friday, Apr 07, 2023

India International Center, New Delhi





SMEV Members Meeting in progress, chaired by Mr. Sohinder Gill, DG, SMEV & CEO, Hero Electric in New Delhi.

Friday, Apr 07, 2023

India International Center, New Delhi



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POLICIES & REGULATIONS

PCMC OFFERS TAX REBATES FOR EV CHARGE POINTS



The state government and the Pimpri-Chinchwad Municipal Corporation to promote the usage of electric vehicles (EVs) as a means of reducing pollution amidst both growing population and the number of automobiles on road has introduced a programme to encourage the installation of EV charging stations. The move has been started by the Municipal Corporation's tax collection and taxation department. Property owners or housing societies that install these charging stations are qualified for a sizeable 2 to 5 percent property tax rebate.

On August 20, 2021, the state's Urban Development Department made the Electric Vehicle Policy public and gave local authorities the go-ahead to put the policy into effect. From January 1, 2022, the Pimpri-Chinchwad Municipal Corporation's tax collection and taxation department has carried out this mandate.

According to the programme, property owners who install EV charging stations and offer charging facilities to other EV owners are qualified for a 2 percent property tax credit. Housing societies are entitled to a sizeable 5% p.roperty tax discount if they offer charging stations to their residents as part of communal amenities like gyms or clubhouses.

Housing societies are further charged domestic rates rather than commercial rates for the specified area, provided that it does not obstruct emergency operations, if they provide commercial charging services on their own property (excluding the main parking lot).

Additionally, property owners who install charging stations that offer services to other EV owners in accordance with the aforementioned guidelines and submit the required paperwork, including an income tax no objection certificate, are qualified for a 2 percent property tax reduction after inspection. Housing societies that offer charging stations to

their residents as part of communal amenities like gyms or clubhouses.

Housing societies are further charged domestic rates rather than commercial rates for the specified area, provided that it does not obstruct emergency operations, if they provide commercial charging services on their own property (excluding the main parking lot).

Additionally, property owners who install charging stations that offer services to other EV owners in accordance with the aforementioned guidelines and submit the required paperwork, including an income tax no objection certificate, are qualified for a 2 percent property tax reduction after inspection. Housing societies that offer charging stations to their members as shared facilities are qualified for a 5 percent property tax reduction after inspection with the production of the required paperwork and an income tax no objection certificate.

Source:  **PUNE PULSE**
www.punepulse.com

DELHI TO INTRODUCE 5% EXTRA SUBSIDY



To increase the adoption of electric vehicles, a special reference in the electric vehicle policy for govt. employees is expected to be introduced by the Delhi Transport department. There is a special mention of subsidies for two wheelers and four wheelers for all citizens and 5% extra subsidy for all govt. employees through Delhi Finance Corporation (DFC).

Source:  **The Indian EXPRESS**

ODISHA HIKES INCENTIVES TO PROMOTE EV



The Odisha Govt. amended the Odisha Electric Vehicle Policy, 2021. The amendment pertains to increase in subsidy on the purchase of two-wheeler, three-wheeler and four wheeler electric vehicles. The policy brought about in the year 2021 aimed at adoption rate of 20 percent electric vehicles by the end of 2025. The state has been able to achieve 4.48 percent adoption registered at the end of 2022 and is unsatisfactory in comparison to the policy objective.

The subsidy has increased from Rs. 5000 per two-wheeler to Rs. 20,000. Similarly, the subsidy for four wheeler has increased from Rs. 50,000 to Rs. 10,000 per Kwh with a maximum of Rs. 1.5 Lakhs. The govt. gave a subsidy of Rs. 30,000.

Source: **THE TIMES OF INDIA**

TAMIL NADU INTRODUCES INCENTIVES TO BOOST E-BUSES



The Tamil Nadu government has unveiled a new electric vehicle policy in an effort to boost the market for electric vehicles. The policy covers initiatives like battery swapping and training workers who are currently employed in the conventional fossil-fuel vehicle industry to transition to the EV industry. The

state government has also stated support for infrastructure for charging, electric mobility in public transport, and consumer incentives in the policy. The previously offered perks for EV buyers, such as exemption from road taxes and registration fees as well as remission of permit fees, are carried over into the new policy. Along with these advantages, it also gives consumers extra incentives to increase the demand for electric vehicles.

Private electric cycles and commercial electric two-, three-, and four-wheelers are recognised in the 2023 policy for incentives that will be given to consumers through direct benefit transfer. The incentive for e-cycles has been set as 20% of cost, with a maximum of Rs. 5,000. According to the policy, the reward for two-wheelers is Rs. 10,000/kilowatt-hour of battery capacity with a cap of Rs. 30,000, and for e-buses, the incentive can reach Rs. one million.

The 2019 EV policy stated that 5% of public buses will be converted to electric by 2030, but by the end of November 2022, the state had not one electric vehicle on the road. The aim for EV bus fleets has raised from 20% to 30% under the 2023 programme.

Source:  **MONGABAY**
NEWS & INSPIRATION FROM NATURE'S FRONTLINE

UTTAR PRADESH GEARS UP TO SET UP VAST NETWORK OF ELECTRIC VEHICLE CHARGING STATIONS

According to a recent announcement, the Uttar Pradesh government has introduced an EV strategy that aims to encourage EV production and give citizens access to a sufficient charging infrastructure. According to a report from ANI, the Smart City Mission has given the urban development department the job of installing EV charging stations and has already started expanding the Comprehensive Electric Mobility Plan (CEMP) to 17 cities with municipal corporations.

The state government is working with NITI Aayog and the Asian Development Bank to develop a CEMP for Lucknow and for all 17 municipal corporation cities chosen as part of the Smart City Mission before being expanded to additional cities. With the help of the plan, urban authorities and other governmental entities will be able to designate locations and land parcels for the planned construction of charging infrastructure. The plan will also identify important pathways for the development of charging facilities. Under the CEMP, a portal will be created to give relevant data on various EV adoption-related topics.

Source: **ETNOW**

EV Industry Sales Trends

The electric vehicles industry registered a growth of 74% Q-O-Q and 51% Y-O-Y. The growth was led by E-2W and E-3W.



Source: EV Reporter

E-2W registered a growth of 66% Q-O-Q and 35% Y-O-Y. The growth was led by Ola Electric with market share of 32.9% followed by TVS motors and Ampere vehicles.



Source: EV Reporter

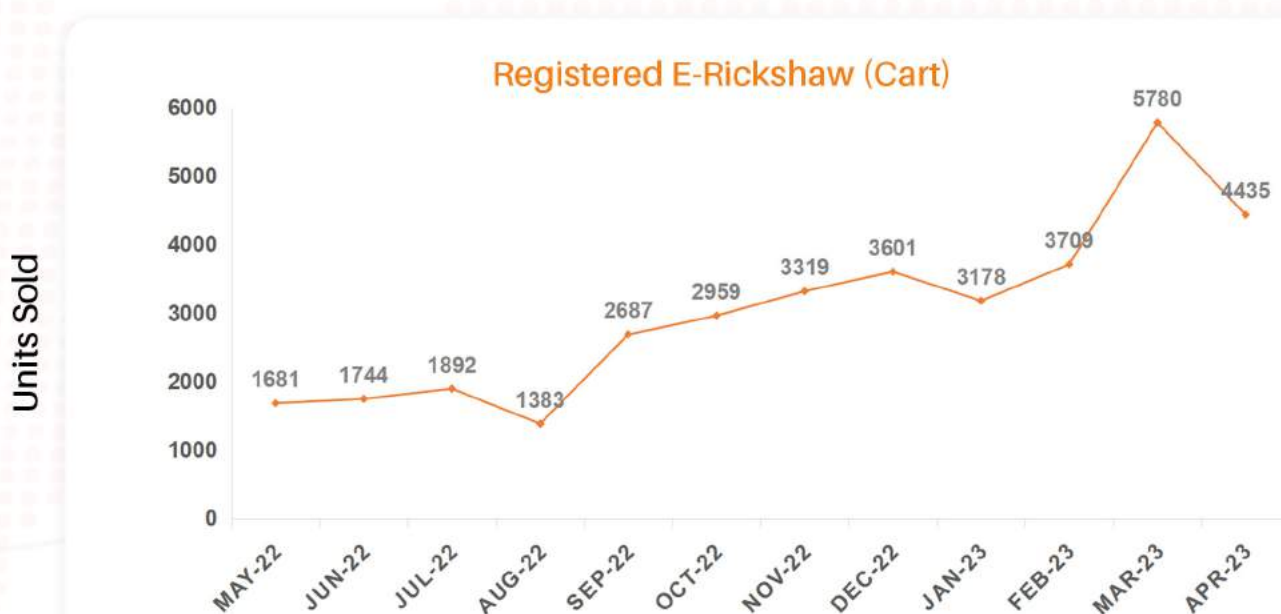
EV Industry Sales Trends

E-3W registered a growth of 94% Q-O-Q and 87% Y-O-Y. The growth was led by Mahindra & Mahindra followed by YC Electric and Saera Electric.



Source: EV Reporter

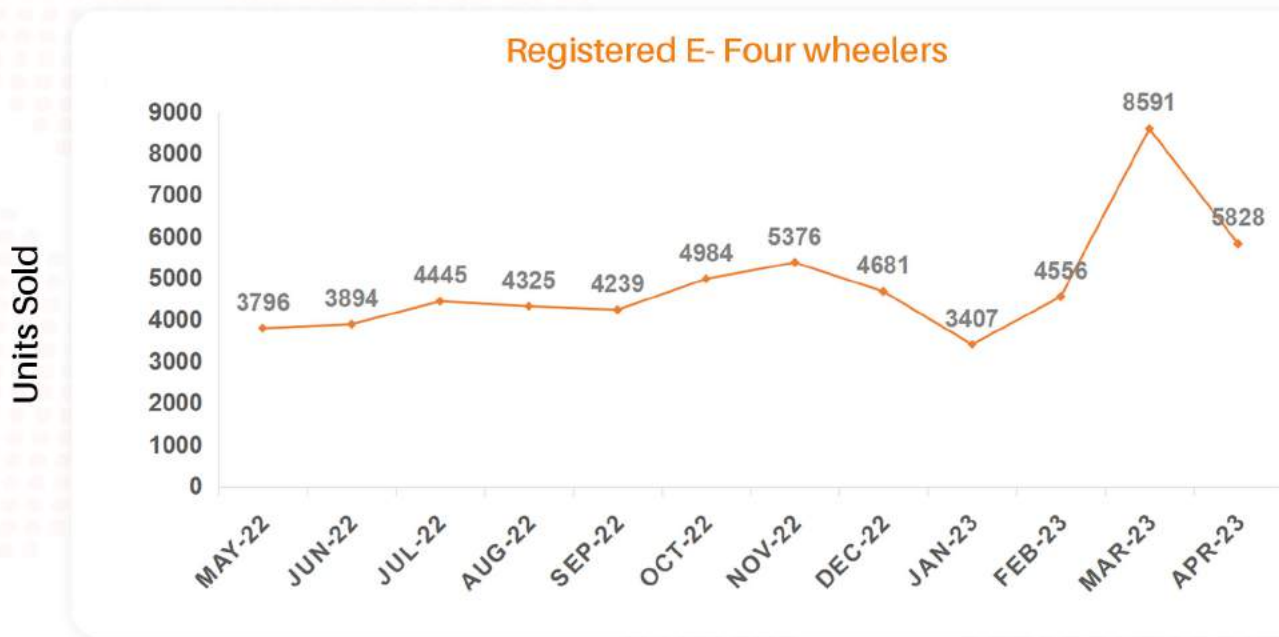
E-3W with cart registered a growth of 158% Q-O-Q and 194% Y-O-Y. The growth was led by Mahindra & Mahindra followed by Piaggio Vehicles and Dilli Electric.



Source: EV Reporter

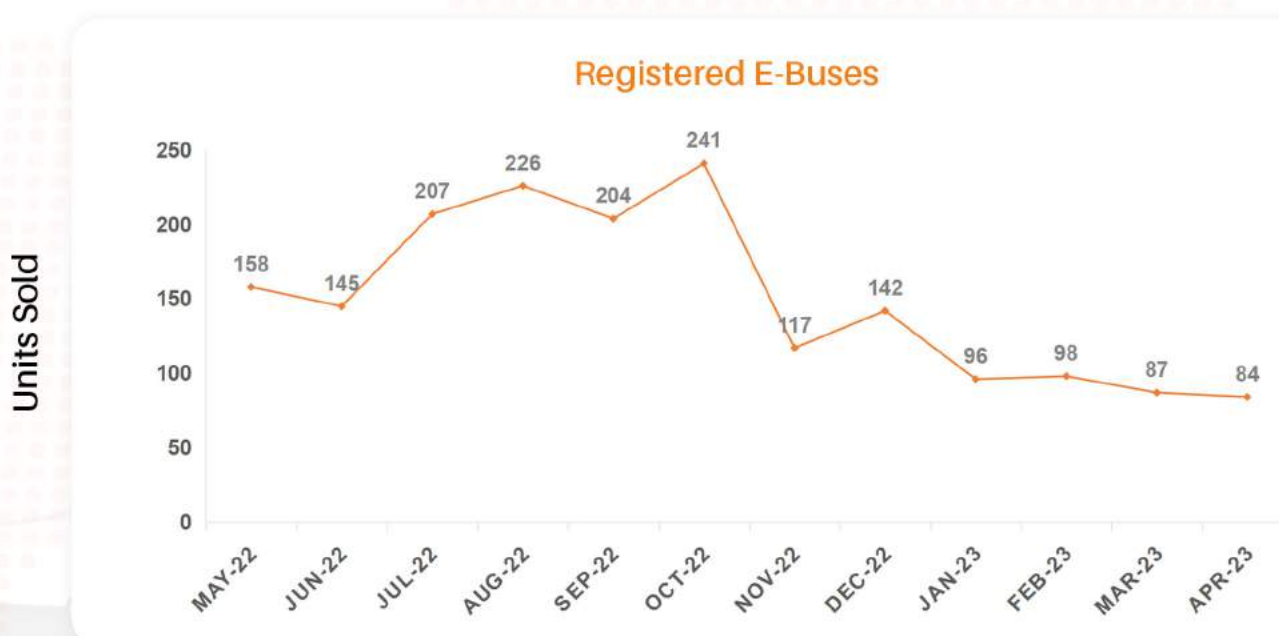
EV Industry Sales Trends

E-Four wheelers registered a growth of 107% Q-O-Q and 119% Y-O-Y. The growth was led by Tata Motors with a market share of 75.3% followed by Mahindra Motors and MG Motors.



Source: EV Reporter

E-Bus registered a decline of -28% Q-O-Q and -29% Y-O-Y. The sales were led by Olectra Greentech, PMI Electro mobility and JBM Auto



Source: EV Reporter

NEW PRODUCT LAUNCHES

Two Wheelers

S.No	Product	Vehicle Type	Launch Date	Price (₹)
1	Hero Electric Optima 5.0	E-Scooter	15-03-2023	1.29L
2	Hero Electric Optima 2.0	E-Scooter	15-03-2023	1.06L
3	TVS iQube	E-Scooter	01-05-2023	1.20L
4	Suzuki Burgman	E-Scooter	01-06-2023	1.20L
5	Harley Davidson LiveWire	E-Bike	01-06-2023	20L
6	Yamaha Neo	E-Scooter	01-06-2023	2.50L
7	Revamp Moto RM MITRA	E-Bike	01-06-2023	1.06L
8	Orxa Mantis	E-Bike	01-06-2023	3L
10	Everve EF1	E-Scooter	01-06-2023	0.9L
11	SVITCH CSR 762	E-Bike	01-06-2023	1.65L

Source: bikedekho, zigwheels

Four Wheelers

S.No	Product	Specifications	Launch Date	Price
1	MG Comet	<ul style="list-style-type: none">• Range 200-250 km/Charge• Hatchback	01-04-2023	10 Lakhs
2	Mercedes- Benz EQS SUV	<ul style="list-style-type: none">• Automatic Transmission• 7 Seater• Body type-SUV	01-06-2023	2Cr

Source: CarDekho.com, AutoCarIndia

COLLABORATIONS & PARTNERSHIPS

Institutional

Uber - Tata Motors

Uber signed an MoU with Tata Motors to bring 25,000 electric vehicles onto the platform. Tata motors will begin deliveries of XPRES-T Evs to uber fleet partners in phased manner. The partnership will lead to electrification of Uber services across Delhi NCR, Mumbai, Kolkata, Chennai, Hyderabad, Bengaluru, Ahmedabad.

Source:  Adda247
Current Affairs

Electric Vehicle Components

Gentari- MoEVing, Gati

Gentari through Amplus signed MoU with Tata Motors in 2022. The first batch of 100 trucks was expected to be delivered throughout March and April for which vehicle handing over ceremony was held at the 8th Smart Cities India Expo. Gentari further expanded its Vehicle-as-a-Service (VaaS) offering through a MoU.

Source:  ET Auto.com
From The Economic Times

Sundaram Fastners

Sundaram Fasteners won the contract of a global automotive manufacturer for the supply of sub-assemblies for their Electric vehicle platform. The company shall invest 200 crore to support the new orders over a period of 6 years. The sub-assemblies will be used for EV models like MHEV/PHEV/BEV, covering various segments including mid-size trucks, SUVs and sedans.


Source:  SMEV Buzz
Professional



Charging infrastructure

Tata Power - Coimbatore Municipal Cooperation

Integrated power company Tata Power and Coimbatore Municipal cooperation partner to install 20 public electric vehicle charging stations. This addition will increase the total charging stations in Coimbatore to 116. The charging station will cater to four wheelers and will provide 24*7 charging facility along with maintenance support to EV owners.

Source:  TATA POWER

Bharat Petroleum - Volt-Up

Volt-up, a Battery As a Service start-up is collaborating with Bharat Petroleum cooperation to set-up 650 swapping stations with 7800 charging docks across 50 cities in three years. The partnership will cater to battery swapping stations of over 45000 electric two-and three wheelers per day.

Source: THE TIMES OF INDIA

Citroen India -Jio BP

Citroen India and Jio BP collaborate to install DC fast chargers across Citroen's key dealership network and workshops across the country catering to EV car customers.

Source:  Business Today

Yulu - Magna

Yuma Energy plans to scale its swap station network from 85 to 500 in multiple cities by 2023. The swap stations cater to e-bike fleets. The focus will be to expand to Tier-1 cities.

Source:  professional

Gogoro, Belrise JV - Govt. of Maharashtra

Gogoro, a Taiwan based battery swapping company is partnering with Belrise, an automotive company based from Mumbai to form an infrastructure company to own the batteries and swapping stations in Maharashtra.

Source: 

Banking & Finance

SIDBI

Small Industries Development Bank of India (SIDBI) has announced the launch of a pilot scheme to strengthen the EV ecosystem by including uptake of two, three and four wheeler through direct and indirect lending.

Source: 

Saera Electric + AMU leasing

Saera Electric Auto Private Limited which is popular for e-rickshaws and e-carts under the brand name of Mayuri has signed a vehicle financial contract with Non-Banking financial company, AMU Leasing Pvt. Ltd (ALPL). ALPL provides loans for electric three and four wheelers against asset hypothecation to eligible organisations.

Source: 

Tata Motors + SBI

Tata motors has signed MoU with SBI to offer financing solutions for purchase of Tata Ace EV. Tata will leverage SBI network to make finance accessible.

Source: 

GLOBAL NEWS

G7 MINISTERS AGREE TO SPEED UP RENEWABLE ENERGY DEVELOPMENT -COMMUNIQUE



In a communique issued on Sunday, the Group of Seven Wealthy Nations announced their commitment to accelerating the advancement of renewable energy and promoting the reduction of fossil fuel consumption, particularly natural gas. Despite acknowledging the necessity to cut back on gas usage, the group also highlighted that investment in the sector could aid in addressing potential energy shortages.

The G7 democratic nations convened in Sapporo, Japan for a two-day conference to discuss matters related to climate change, energy and environmental policies. The recent invasion of Ukraine by Russia has elevated the importance of renewable energy sources and energy security, making them more pressing topics for the discussion.

Source: **THE ECONOMIC TIMES**

Date: April 16, 2023

AMERICA'S CHARGING NETWORK IS THE BIGGEST HURDLE ELECTRIC VEHICLES FACE



America faces a dysfunctional public charging station. A study conducted by researchers at the University of California at Berkeley and the climate advocacy group Cool the Earth, reported that more than quarter of 657 charging points didn't function during a two-minute charging test. There were instances of charging cable not reaching the vehicle's charging point, payment systems not working, charger screen broken or the network being down. The executive director of Cool the Earth Exclaimed that for mass adoption, people would like to pay and move along and charge their vehicles.

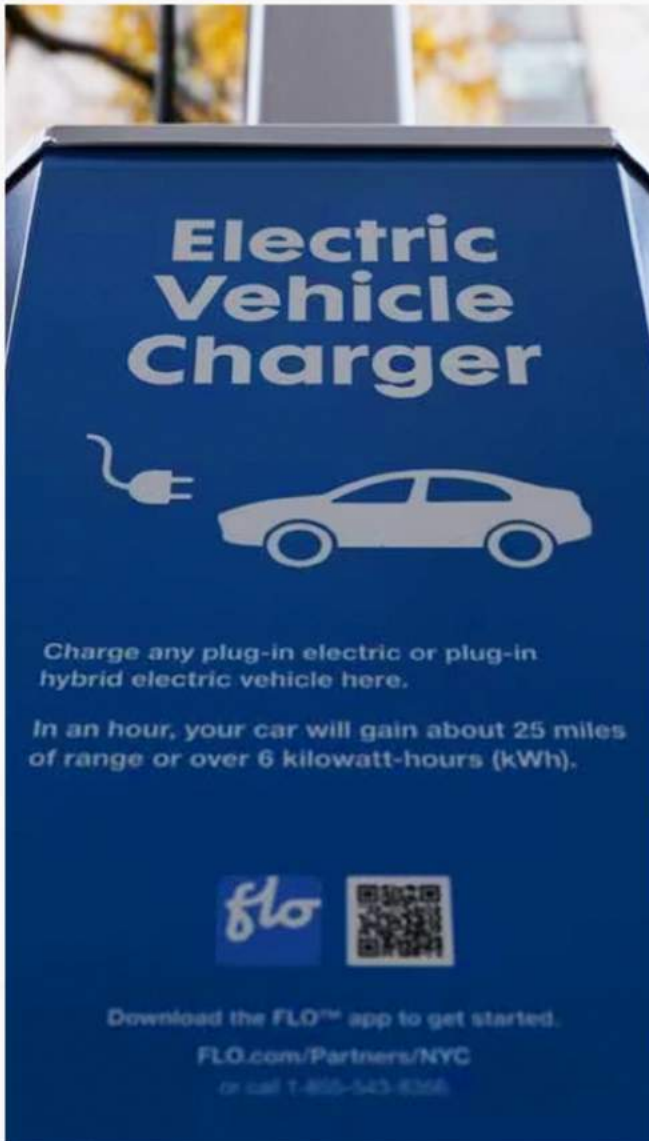
Another survey, by J.D Power reported that 1 in every 5 EV owners were unable to charge due to system malfunction.

In addition to the issue of malfunctioning charging points, there is also issue of decentralised nature of charging. There are many players who offer public charging such as private companies, utilities, government and automakers. Each of them have their own machine and ways of paying for charging. This is a mess for drivers who want to plug in and a logistical nightmare for regulators.

Source: **The Washington Post**

Date: April 13, 2023

CHINA'S INVESTMENT IN EUROPE RUNS ON BATTERIES



North American markets are making efforts to reduce their dependence on China through U.S inflation reduction act. This has resulted in China rapidly expanding their expense in Europe which is the second largest market for electric vehicles. China is a leader in electric vehicle production including batteries used to power vehicles. Europe, however has very few players manufacturing batteries. This is a win-win situation for both. China's EV battery manufacturers are meeting the demand, building or expanding several plants in Britain, France, Germany and Hungary.

Source:  REUTERS®

Date: April 21, 2023

AUSTRALIA INTRODUCES VEHICLE POLLUTION RULES TO BOOST EV UPTAKE

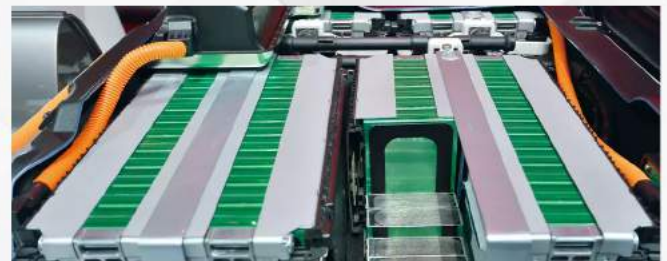


Merely 3.8% of the cars in Australia are electric. This is way behind other developed countries such as Britain and Europe where electric cars made up 15% and 17% sales respectively. Australia has not developed a fuel efficiency standards that encourage manufacturers to supply more electric vehicles. The New National Electric Vehicle Strategy will developed a fuel efficiency standard to outline how much carbon di-oxide a car will produce.

Source:  ET Auto
The Most Trusted News & Knowledge Platform

Date: April 19, 2023

SOUTH KOREA TO OFFER USD 5.3 BILLION IN FINANCING TO EV BATTERY FIRMS



South Korea will financially support domestic battery makers over the next 5 years as a response to United States' Inflation Reduction Act (IRA) and to boost their competitiveness. The financial support will be in the form of lower interest rates and insurance premiums.

Source:  ET Auto
The Most Trusted News & Knowledge Platform

Date: April 9, 2023

DOMESTIC INVESTMENTS

BSES has facilitated 2300 EV charging points in Delhi, 900 more to come



Around 2300 electric vehicle (EV) charging points have been installed in Delhi by the BSES discoms BRPL and BYPL, and 900 more are currently being set up. Over 900 places in South, East, Central and West Delhi now have 2300 charging outlets installed, including 1,123 private, 745 public, and 419 for exclusive BSES use. According to the corporation, discussions with a number of partners are underway to increase the charging infrastructure.

Through the Switch Delhi Portal, BRPL and BYPL customers can have a private EV charging point placed at their residences, group housing societies, multi-story apartment buildings, RWA offices, and retail establishments.

The Delhi government is offering a one-time subsidy of Rs 6000 for the first 30,000 charging outlets in order to promote the private charging initiative.

Source: **TIMES NOW**

Date: April 11, 2023

Calcutta boasts of a Public Power Bank for Electric Vehicles



Chargeup is a battery swapping service facility for Electric Vehicles which has successfully raised \$7million. The funding will be used for expansion to 20 new cities and power 50000 new drivers. Through this funding, the company intends to strengthen its FineTech (Finance-Network-Technology) Platform, and tech stack to ensure 100 per cent uptime. This will also enable the drivers to own an EV by spending 40 per cent less and earning 80 per cent more. The company currently operates 200+ swap stations in Delhi-NCR and executing 1 lakh battery swaps a month.

Source: **Business Standard**

Date: April 11, 2023

Two-wheeler EV leaders get show-cause notices



The government has sent show-cause notices to prominent electric two-wheeler (E2W) manufacturers such as TVS, Hero Motocorp, Ola Electric, and Ather Energy. The notices issued pertain to allegations of price

manipulation and failure to comply with guidelines related to localisation of components, resulting in violations of the Phased Manufacturing Programme (PMP) regulations. The companies have been requested to explain why punitive action should not be taken against them. Company representatives have reportedly engaged in discussions with government officials to clarify their positions on the matter.

There are around 50 E2W companies/brands in India and around 20-21 are certified to get subsidies under the FAME-2 scheme. Subsidies have been halted for 16-18 companies currently.

Source: 

Date: April 13, 2023

MG motor Invests Rs. 800 Crore to produce Comet EV locally



MG motor has invested Rs.800 crore to produce plant in Halol, Gujarat. The plant will produce 3000 units a month. The Comet has a range of 230 km.

Source: 

Date: April 23, 2023

Hyundai to announce INR 15000 crore investment programme in TN



Proposed investment will be spread over 7-10 years in their plant in Sriperumbudur, Tamil Nadu. The investment will go towards the development of an ecosystem for electric vehicles manufacturing and alternative fuel technologies.

Source: **THE TIMES OF INDIA**

Date: May 15, 2023

After J&K, lithium reserves found in Rajasthan



Lithium reserves found in Rajasthan's Degana and Jammu holds massive potential to accelerate EV production within the country along with bringing down dependence on oil imported for mobility. According to PTI, India's extractable reserves should be sufficient to power 184.4 million electric cars.

Source: 

Date: May 10, 2023

TVS to export electric vehicles in FY 24



TVS Motor Co. has presence in the European market and thus has plans to boost its electric two wheeler manufacturing capacity. The ASEAN region is home to established export markets for Internal combustion engines.

Source: 
The Most Trusted News & Knowledge Platform

Date: April 05, 2023

UPCOMING EVENTS

31ST MAY, 2023 


Radisson Blu Plaza, Delhi 

EMobility+ & Firstview Group

The EV Charge India 2023

www.firstviewgroup.com 

11TH - 13TH OCTOBER, 2023 

Karnataka Trade Promotion Organisation (KTPO) 

Valiant Product & Services Pvt. Ltd.

India E-Mobility Show

www.indiaemobilityshow.com 

 **01ST - 6TH MAY, 2023**


 *Pragati Maidan, Delhi*

India Energy Storage Alliance

India Energy Storage week 2023

 www.iesw.in

 **13TH - 15TH SEPTEMBER, 2023**

 *Bangalore International Exhibition Centre (BIEC), Bengaluru*

Messe Muenchen India Pvt. Ltd.

EVS Live!

 www.mmi-india.in

 **06TH - 09TH NOVEMBER, 2023**

 *EcoPark, Rajarhat, Kolkata*

Tafcon

International Exhibition & Conference on Alternate Future Energies, Equipment & Electric vehicles

 www.afevexpo.com

SOCIAL MEDIA GRAFFITI

SMEV @TheSMEV · Nov 30, 2022
Met along with President, SMEV & apprised the CEO @NitinGadkari, on the overall developments & progress made by the E-Mobility sector.

SMEV is committed to working closely with the Govt. in achieving our National Goals on #Clean & #Sustainable #Mobility...

@DrMNPandeyMP @TheSMEV



SMEV @TheSMEV

The SMEV-EY Report on #electricvehicles was released by the Hon'ble Ministers @DrMNPandeyMP and @Gen_VKSingh ji, at @TheSMEV Conference & Awards...

For more please follow smev.in



SMEV @TheSMEV · May 27

Warm #birthdaywishes for Shri @nitin_gadkari ji, Hon'ble Union Minister & Fmr, National President BJP!

Under your dynamic vision, India's road connectivity, #infrastructure & #electricmobility is reaching phenomenal heights...

Praying for your good health & longevity...



SMEV @TheSMEV

"There is a need for us to start looking at all aspects that impact industry's growth. If incentives are presented for the industry to innovate, we will be able to accelerate change." Gen. Dr VK Singh, Ministry of Road Transport & Highways, Govt. of India



Naveen Munjal @nmunjali · Apr 18

This #WorldHeritageDay2023 let's commit to a sustainable future to preserve our heritage sites by switching to #electricmobility. Reducing carbon emissions can preserve our landmarks for future generations. Make #TheSmartMove toward a #sustainable future!

Hero Electric @Hero_Electric · Apr 18

Happy World Heritage Day! Let's celebrate our cultural & natural treasures by taking action to reduce carbon footprint & pollution. Together, we can promote electric mobility & support conservation efforts to protect our world heritage sites for future generations. #HeroElectric



SMEV @TheSMEV

The SMEV welcomed the Hon'ble MPs from the Energy, Transport & Industry Parliamentary Committees, for an Interactive Session on driving faster adoption of #electricvehicles, while our Nation celebrates #azadiKaamritmahotsav2022 More on smev.in



Naveen Munjal @nmunjali · Apr 22

Make #TheSmartMove by making sustainable choices every day like planting trees, making environment-friendly choices at home, or opting for an #ElectricVehicles like Hero Electric, we can all make a difference in creating a greener and cleaner planet #GoGreen #EarthDay2023

Hero Electric @Hero_Electric · Apr 22

It's important to protect our home planet by switching to environment-friendly practices and what better way to do it than with an eco-friendly mobility partner? Hero Electric! Happy Earth Day, everyone! #happyearthday #HeroElectric #greenmobility #EV #electriccooler



Naveen Munjal @nmunjali · Mar 23

It's a #SmartMove by Assam Govt. to introduce #EVs in Guwahati & transition public transport to non-fossil fuel sources by 2026 to curb carbon emissions! It is a big step towards a green, clean & #sustainable future



auto.economictimes.indiatimes.com

Assam introduces EVs in Guwahati to cut down carbon emission - E... Mission LIFE: The Mission in Assam will be followed by a weeklong series of activities to be carried out at district level addressing all ...

Naveen Munjal @nmunjali · Apr 12

With nearly 5 lakh #EVs on road, UP is leading the charge for green mobility with road tax & registration fees exemptions. It's a significant step to promote #sustainable mobility & support national climate action goals. Let's all work towards a cleaner future #GreenMobility 🌱

SMEV @TheSMEV · Sep 26, 2022

SMEV congratulates and welcomes Shri Sivakumar Naidu Kilu (IAS 2011) for being appointed as Deputy Secretary in Ministry of Heavy Industries. We appreciate his kind gesture in listening to developments in the EV industry and assuring them of full support to strengthen the ecosystem



Naveen Munjal @nmunjali · Mar 15

Revolutionize your daily commute with Hero Electric's newest product range, which boasts connected, smart & innovative technology. Say hello to a cleaner & greener future. #HeroElectric #SustainableMobility



Naveen Munjal @nmunjali · Mar 29

Excited to echo Shri @nitin_gadkari ji's view on India's #EVRevolution! Proud to be part of India's journey to becoming the No.1 EV manufacturer. Discovery of Li reserves in J&K also helps us become #Atmanirbhar & reduces import dependency for a greener tomorrow #ElectricIndia

Economic Times @EconomicTimes · Mar 24

Addressing an event organised by industry body CII, the road, transport and highway minister said there is a need to encourage public transport, and electric buses are the future.

[economictimes.indiatimes.com/industry/autol/...](https://economictimes.indiatimes.com/industry/autol/)

Naveen Munjal @nmunjali · Apr 27

It's #TheSmartMove by @CMOOdisha on hiking incentives on EVs to encourage faster switch to clean mobility. It fortifies the commitment towards building a #sustainable and carbon-negative mobility ecosystem #SwitchToElectric 🌱

ABOUT SMEV

The SMEV is the registered (in 2009), industry association representing manufacturers of Electric Vehicles (EV) and Electric Vehicle components. SMEV works closely with the Central and State Governments to assist the formulation of policies and processes supporting the EV ecosystem.

The SMEV has contributed significantly to the cause of promotion of EVs in the country through the NEMMP-2020 and FAME policy, the rationalization of import duties and reduction of local taxes and levies. SMEV is keen to play an active role in the discussion of the issues faced by the Electric Vehicles industry and practical aspects to help enhance the adoption of Electric Vehicles towards meeting the greener & sustainable goals of our Nation.

The SMEV is the perfect platform to learn, share and experience as we move forward into an age where alternative energy efficient modes of transportation would be in demand. Electric Vehicles Technology is gaining ground and popularity rapidly. This segment has tremendous potential as it is an environment-friendly, non-polluting means of transportation.

The SMEV, today is proud to have around 100 EV, Battery & Component Manufacturers as it's esteemed Member comprising of Multinationals, Electric- Four /Three Wheeler Manufacturers, Electric - Buses & HEVs, Electric- Two Wheeler Manufacturers, Electric Vehicle -Auto Components Manufacturers, Electric Vehicles- Battery Manufacturers, EV Charging Companies & Startups.



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 | @TheSMEV

IMPORTANT GOVERNMENT LINKS

- | | |
|---|--|
| 1. Ministry of Heavy Industries
heavyindustries.gov.in/ | 5. NITI
www.niti.gov.in/ |
| 2. Ministry of Road Transport & Highways, Government of India
morth.nic.in/ | 6. ARAI
https://www.araiindia.com/ |
| 3. Ministry of Power
powermin.gov.in/ | 7. Convergence Energy Services Limited
convergence.co.in |
| 4. Ministry of New & Renewable Energy
mnre.gov.in/ | 8. Society Of Manufacturers Of Electric Vehicles
smev.in |

ACTIVE TENDERS

End Date: 09 June 2023 upto (14:30) | State: Delhi | www.convergence.co.in/tender

Selection of Bus Contractor for Procurement, Supply and Maintenance of 4675 Electric Buses and the Development of Allied Electric and Civil Infrastructure on a Dry Lease Basis under National E-Bus Program (NEBP)

End Date: 30 May 2023 | State: Delhi | www.tenderdetail.com/Indian-Tenders

Bids are invited for hiring of Electric Vehicles (Short Term) for Delhi Govt. users - Sedan Electric Vehicle; 2400 Kms & 300 Hours, hiring of Electric Vehicles (Short Term) for Delhi Govt. users - Hatchback Electric Vehicle; 2400 Kms & 300 Hours.

End Date: 03 June 2023 | State: Madhya Pradesh | www.tenderdetail.com/Indian-Tenders/TenderNotice

Tender For Supply Of 3W electric Vehicle Category 5L. RTO Registration, Insurance Etc. of the Vehicle will have to be done by concerned tenderer and the vehicle will have to be delivered by getting a third party inspection done in the Municipal Corporation, Ratlam, Madhya Pradesh

End Date: 24 May 2023 | State: Maharashtra | www.tenderdetail.com/Indian-Tenders/TenderNotice

Nashik Municipal Corporation has published Supplying, Erecting, Commissioning of Electric Vehicle Charging Station in NMC area

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Statutory Disclosure: HRERA Project Registration No: HRERA-PKL-JR-312-2022 dt: 18.05.2022, DTCP License numbers: 8 of 2016, 107 of 2017, 71 of 2019 and 43 of 2022, Haryana Real Estate Regulatory Authority, Panchkula website: www.haryanareg.gov.in Promoter: Model Economic Township Limited. Website: www.modeleconomictownship.com
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