All India EV

EDUCATE | PROMOTE | AWARE

July-2025

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Editor’s Note

Ankit Sharma
Co-founder & Chief Editor

The first half of 2025 has made one thing crystal clear—India’s EV sector is not just growing, it's accelerating.

From a record $2 billion in EV-focused funding to landmark tech rollouts like Kerala’s unified charging-V2G platform, and from Tata’s Harrier EV storming the market with 10,000 bookings in 24 hours to Telangana registering 50,000+ EV sales in just seven months, the pace is unmistakably electric.

This July edition captures a sector in transition. A transition not just of vehicles, but of vision.

We’ve featured powerful stories:

🔋 The rise of Made-in-India battery diagnostic tools from Maxwell—because EV ownership is as much about longevity as it is about mobility.

🔧Truck retrofitting as a uniquely Indian engineering marvel from iX Energy, demonstrating how legacy vehicles can leap into the future.

💰 Our “EV Finance Hub” dives deep into the credit-risk dynamics lenders face in this nascent industry—while also spotlighting the capital chasing EV-as-a-Service, battery swapping, and logistics electrification.

🌍We also decode V2G (Vehicle-to-Grid) technology, not as a buzzword, but as a near-future reality where your EV can power your home—or your neighbourhood.

And in our ShEV spotlight, we sit down with Ms. Sulajja Firodia Motwani, Founder & CEO of Kinetic Green, to reflect on over a decade of EV leadership, local manufacturing, and what it means to compete globally with conviction and clarity.

As always, we aim to Educate, Aware, and Promote. Not just trends and technologies, but the stories, voices, and innovations shaping India's clean mobility revolution.

Here’s to powering ahead—with purpose.

Warm regards,
Ankit Sharma
Editor, All India EV

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Electric 2W Sales - July 2025

TVS	22,247
BAJAJ	19,669
OLA	17,850
ATHER	16,241
Hero	10,495
GREAVES ELECTRIC MOBILITY	4,197
PURE	1,688
BGAUSS	1,595
River	1,518
KINETIC GREEN	1,226
e-SPRINTO	1,020
REVOLT	820
LECTRIX	509
SIMPLE	467
ward wizard	430
HONDA	406
KOMAKI ELECTRIC VEHICLE DIVISION	249
oben ELECTRIC	230
MOTOVOLT	206
OKINAWA Power the Change	183

E-Rickshaw Sales - July 2025

1	YC	3,632
2	MAYURI	2,155
3	City Life	1,773
4	उड़ान	1,235
5	Mini Metro™	1,078
6	TERRA MOTORS	1,010
7	ePanther	942
8	SKS Arzoo	930
9	INDO WAGEN	920
10	VB VANDE BHARAT	916
11	JSA THREE WHEELERS	880
12	BADSHAH	811
13	KHALSA ev	760
14	SARGAM E RIDE	708
15	mahindra LAST MILE MOBILITY	702
16	ZEOPLUS	641
17	SAARTHI	619
18	ele	607
19	AAHANA eVEHICLES	601
20	JEZZA	506

E-3W Goods & Passenger - July 2025

3W Goods	Sales
Mahindra last Mile Mobility	568
Bajaj Auto	387
Omega Seiki	300
Euler Motors	282
Piaggio Vehicles	130
E Royce Motors	85
Kenitic Green Energy	50
Atul Auto	43
Thukral Electric	38
Dilli Electric	34
KLB Komaki	25
TI Clean Mobility	16
Baxy Ltd	13
ECO Dynamics	13
P.S. Enterprise	10
Champion Polyplast	7
Khalsa E-Vehicles	7
Saera Electric	7
Mini Metro	6
MLR Auto	6

3W Passenger	Sales
Mahindra Last Mile	8,480
Bajaj Auto	7,231
TVS Motor Company	2,205
Piaggio Vehicles	1,062
TI Clean Mobility	576
Omega Seiki	168
Dilli Electric	111
Euler Motors	72
Arul Greentech	71
Atul Auto	65
Saera Electric	45
Thukral Electric	35
Baxy Ltd	27
MLR Auto	25
EVCO Automobile	24
J.S. Auto	21
Khalsa E-Vehicles	18
Best Way Agencies	17
Victory Electric	13
JMT Vehicles	11

Electric Bus Sales-July 2025

JBM Auto

145

Olectra Greentech Ltd

89

Pmi Electro Mobility Solutions Private Limited

49

Pinnacle Mobility Solutions Pvt Ltd

24

Switch Mobility Automotive Ltd

22

Tata Motors Ltd

21

VE Commercial Vehicles Ltd

7

Azad India Mobility Ltd

5

JBM Electric Vehicles Pvt Ltd

3

Electric 4W Sales-June 2025

Company	Sales
Tata Passenger	6,012
JSW MG Motor	5,061
Mahindra Electric	2,578
Hyundai Motor India	610
BYD India	457
BMW India	233
Mahindra & Mahindra	232
KIA INdia	57
Mercedes Benz India	51
PCA Automobiles	41

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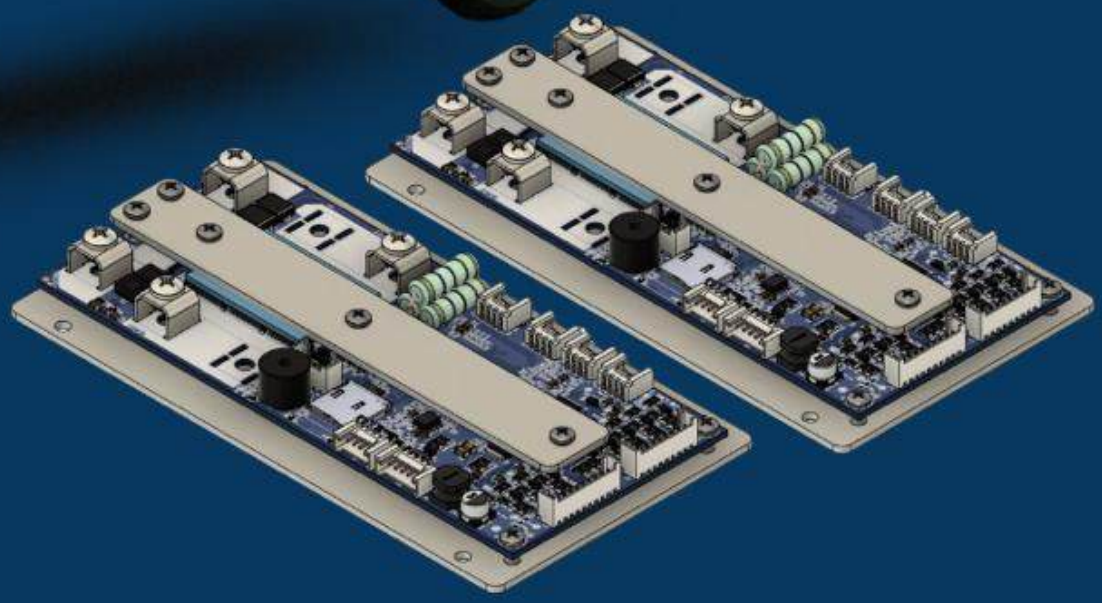

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Milestones

01

Telangana | Nearly 50,000 electric vehicles sold in over seven month

"According to a report card issued by the office of Transport Minister Ponnam Prabhakar, from November 16, 2024 to June 30, 2025 as many as 49,633 EVs were sold."

02

A New Era Begins Harrier EV Smashes Records 10,000 Bookings in just 24 Hours

Tata Motors has launched the all-electric Harrier EV, and it has already received over 10,000 bookings within a single day. The SUV is priced between ₹21.49 lakh and ₹29.74 lakh (ex-showroom, charger not included). Production has also started at Tata's Pune factory.

03

Kerala Plugs In: V2G & Unified EV Charging UNVEILED!

In a landmark move that places Kerala at the forefront of India's green mobility transition, the state has unveiled India's first Vehicle-to-Grid (V2G) technology demonstration along with a unified EV charging app and solar-powered energy solutions.

04

Indian EV Market: 138,000 Unit Sales Projected for 2025!

The worldwide passenger EV market is projected to hit 20 million units in 2025, accounting for more than 20 per cent of all light-duty vehicle sales

05

Lifetime Battery Warranty: Lifetime Battery Warranty for Curvv & Nexon EV

As part of an exclusive loyalty programme, Tata Motors is also offering an additional ₹50,000 benefit to existing TATA.ev owners who choose to upgrade to either the Curvv.ev or Nexon.ev 45 kWh.

06

Tesla finally launching in India First Deliveries Expected This August

Once the Mumbai showroom opens its doors, visitors will be able to check prices, compare different models, and choose trims that suit their needs.

Sona Comstar Enters China: $20M Joint Venture with China’s Jinnaite Machinery

07

“Sona Comstar is strategically expanding its presence in the faster-growing Asian markets. The driveline manufacturing operations in China align with the company's strategy to expand its presence in Asian markets, particularly in India, China, Japan, and South Korea, while also working to increase its market share further in North America and Europe.”

08

Greaves Eltra City XTRA Sets New EV Range Benchmark

The scooter has officially entered the India Book of Records after covering an astounding 324 kilometers on a single charge, redefining expectations around electric two-wheeler range and performance.

Ather Energy Powers Up: 400+ New Fast-Charging Points Across Maharashtra

09

“Maharashtra has been a strong market for us, and we’ve seen EV adoption here grow steadily over the years. As more people switch to adoption here grow steadily over the years. As more people switch to a challenge."

10

2 Lakh+ EVs and Counting: Telangana Accelerates Toward an Electric Future

The registration figures demonstrate remarkable growth, with EV numbers nearly doubling within a year. The total registered EVs in Telangana increased from around 1.25 lakh in 2023-24 to over 2 lakh in 2024-25.

ShEV

Ms. Sulajja Firodia Motwani
Founder and CEO, Kinetic Green

> *Our batteries, motors and controllers, are all locally manufactured, which often results in us having a strong supply chain network. This level of localization has several positive effects on the overall business including – local employment generation and efficiency in logistics etc.*

- **You've been a pioneer in India's EV space, leading Kinetic Green's journey from its inception. What inspired you to take the plunge into electric mobility back in 2011, when the market was still nascent? Also, what were the key challenges you faced in convincing stakeholders about the EV future?**

I have been part of the Indian automotive industry for quite some time. Back in the day, electric mobility was relatively unknown to the public. Hailing from a reputed business family, I always had a passion and vision to be an entrepreneur, but I was certain that this vision should guide a revolution. In the first decade of the new millennium, discussions about EVs were not mainstream but were a part of the discussions within the boardrooms as well as the consumers.

At the time, I decided to launch Kinetic Green, a company that's not only built on legacy but also an EV first company that not only envisions to make mobility simple for the masses but also protects the environment and promotes sustainable mobility.

During that time, I would often indulge in constructive dialogue with the various stakeholders. While most were optimistic about the future of EV, they had reservations on whether all the stakeholders involved would be inclined towards building this EV ecosystem.

I would like to believe that they saw the passion, a strategic approach towards the business coupled with a positive future of EVs in the country which ultimately convinced them.

- **Kinetic Green has evolved as a key player in the Indian EV Market. What has been your guiding vision for the company, and how do you see Kinetic Green's role in shaping India's EV revolution? Can you share a proud moment or breakthrough innovation from your journey?**

My vision for Kinetic Green is for the company to become a leader in green mobility for the masses. All the activities, launches, partnerships, and ventures we undertake is done with an aim to achieve this ultimate objective. I believe Kinetic Green has and will continue to play a pivotal role in shaping India's EV revolution.

Launching iconic products, expanding our sales and network, bringing in robust technology, and forging successful partnerships has been key to our key effort in revolutionizing the sector.

Entering into a new segment can be challenging and one of our greatest achievements is the recent launch of the premium golf carts which not only gives us an opportunity to explore a novel segment but also enables us to partner with one of the world's most iconic brand – Tonino Lamborghini.

- **The Indian government has launched several initiatives like FAME, PLI schemes, and PM-eBus Sewa to promote EV adoption. From your perspective, how impactful have these policies been for players like Kinetic Green?**

Government policies have played an important role in accelerating the adoption of electric vehicles in India through the offer of incentives, infrastructure development, and regulatory support.

The FAME scheme, which concluded in March last year under its second phase, provided subsidies for electric two-wheelers and electric three-wheelers.

Other schemes like the Electric Mobility Promotion Scheme (EMPS) launched last year aim to further push the EV penetration in the affordable segment even further. Schemes such as Production-Linked Incentive (PLI) scheme for Advanced Chemistry Cell (ACC) battery manufacturing promote domestic production as well as research and development.

The state governments have also put in place their respective schemes to further augment, promote, support and increase penetration of EV across the country.

Cumulatively, these policies create a favorable environment for companies like Kinetic Green and complement their ‘Make In India’ initiative while providing support in the expansion of the overall EV ecosystem.

- **Where do you think India still needs to bridge gaps—whether in charging infrastructure, local manufacturing, or policy frameworks—to accelerate EV adoption across segments?**

In terms of policy, the government has been extremely positive and has created frameworks that promote and support the electric vehicle industry.

While the country has made significant progress in building the EV ecosystem, I do feel that we have a lot more work to do when it comes to charging infrastructure which will ultimately strengthen sales.

A)For years, we have been heavily dependent on China for spare parts, rare earth magnets, and other materials alike. As a country and industry, we need to come together and counter that monopoly and ‘build local, sell global’.

Additionally, I would like to believe there is a huge communication gap when it comes to myths on EVs.

We need to bust certain myths about EVs and strategically communicate with our consumers. With respect to local manufacturing, all our products are ‘Made In India’, this not only reduces foreign dependence but also helps reducing prices for the consumers offering them quality products at an affordable price.

Enhancing charging infrastructure, encouraging local manufacturing, and building pro EV policies are 3 key pillars to accelerating EV adoption in India.

- **How do you envision the next decade for India's EV market? What role do you see for indigenous companies like Kinetic Green in competing globally, especially with Chinese and European players entering India? What's your take on the importance of local supply chain development for batteries, motors, and controllers?**

The next decade will be exciting for the EV industry. I foresee a massive growth in sales and rise in exports. At Kinetic Green, we have already taken the leap into going global with our newly launched golf carts. We plan to build on this segment going forward with an enormous plan for exporting these products across the world.

With respect to Chinese and European players entering India, I have always believed that healthy competition is always welcome.

Such players in the market not only pamper the customers with greater choice but also promote innovation and encourage Indian manufacturers to provide quality products at a competitive price.

I would like to add that Kinetic Green has always focused on producing high quality products for the masses at a competitive price and will continue to do so going forward as well. At Kinetic Green, we are all for local production.

Our batteries, motors and controllers, are all locally manufactured, which often results in us having a strong supply chain network. This level of localization has several positive effects on the overall business including – local employment generation and efficiency in logistics etc.

- **As a woman leader in a highly competitive and male-dominated industry, what has been your biggest lesson? What advice would you give to young women entrepreneurs who want to make a mark in India's EV sector?**

Being a women leader in a traditionally male dominated sector has taught me the art of survival irrespective of the challenges and crisis that may arise.

My advice to young entrepreneurs, especially women would be to invest in knowledge and skill development, seek mentorship and build an exceptional network, be bold and innovative in one's approach, and take on crisis as a challenge and seek it as an opportunity to grow.

These are a few lessons that I have followed in my professional life which have worked well for me.

- **What qualities do you think next-generation entrepreneurs need to succeed in India's clean-tech and mobility space?**

I have immense confidence in the next generation of entrepreneurs. They are bold, innovative, and hungry for excellence.

It is my firm belief that in this dynamic environment relevant skills will play a pivotal role in running organizations within the country's clean-tech and mobility space. It is imperative to be passionate about industry and the environment.

The individual must be technologically inclined, which has become a critical component that drives the industry forward. Additionally, one needs to be a master in negotiations and the ability to forge mutually beneficial partnerships.

In this dynamic world today, it is extremely difficult to have expertise within all facets of a product. Hence, it is necessary to collaborate with other expert leaders that bring in their unique insights and blend into the common vision.

- **With sustainability being a key pillar for EV adoption, how is Kinetic Green integrating ESG (Environmental, Social, and Governance) goals into its operations and product innovations?**

A)Kinetic Green is absolutely committed to conducting its business operations in a manner that prioritizes environmental sustainability, social responsibility, and strong corporate governance.

For example, we implement efficient and responsible waste management programs for batteries and other generated waste. Additionally, we also ensure the use of sustainable and eco-friendly material in manufacturing process.

As a practice, we also aim to educate the customers on the environmental benefits of EVs and provide transparent information on product safety and end-of-life product management.

These are a few policies that we follow with an aim to run our operations more effectively, efficiently, and sustainably.

Understanding Credit Risks in India's Nascent EV Ecosystem

Mr. Sumeet Gambhir: Founder EVRise Finance

With the rapid expansion of e-commerce and a national mandate for 100% fleet electrification, there is surging demand for debt capital from EV operators across all vehicle categories.

By the very nature of their business, SME lenders tend to be conservative. Their returns on lending are capped, even if the borrower performs exceptionally well, while they bear 100% of the downside risk if the borrower's business falters.

This inherent conservatism becomes even more pronounced when lending to businesses in nascent industries such as Electric Vehicles (EVs).

Why Lenders Remain Cautious on EV Financing

Although the EV industry is experiencing accelerated growth, several factors continue to warrant caution among lenders.

These include evolving technologies, an underdeveloped resale market for EV assets, and OEMs still navigating the learning curve for providing timely service and maintaining vehicle uptime.

These risks compel lenders to be selective and measured in capital deployment to emerging EV businesses.

Balancing Asset Risk and Credit Risk

In secured lending, such as EV financing, lenders typically evaluate asset risk separately from credit risk and attempt to mitigate one with the other. However, this risk-balancing strategy has its limits, often resulting in low to moderate loan approval rates.

Once approved, loan pricing reflects a combination of expected credit losses, cost of funds, operational expenses, and target margins.

In general:

- A medium to high asset risk may be mitigated if the borrower presents low credit risk—such as a well-established business acquiring EVs for captive use.
- A high credit risk borrower is usually a straightforward rejection.
- A medium credit risk borrower might be considered if paired with a strong, low-risk asset.

Understanding it through an Example:

Consider a new EV launched by either a new OEM or an incumbent. It takes time for the product to gain market acceptance, and the OEM must prove its service reliability.

Lending against such an asset entails considerable risk. However, if the borrower is a well-established, profitable manufacturing unit acquiring the vehicle for captive use, and is confident in the OEM's capabilities, the lender may still consider financing the deal.

On the other hand, if the borrower is a new-age fleet operator with limited credit history, the proposal becomes far more difficult for a lender to pursue.

Rising Demand from EV and Battery Operators

With the rapid expansion of e-commerce and a national mandate for 100% fleet electrification, there is surging demand for debt capital from EV operators across all vehicle categories.

To reduce upfront vehicle acquisition costs, many operators are turning to battery-as-a-service models, relying on battery swapping or pay-per-use arrangements.

This creates a parallel demand for capital from battery station operators, who require funding to establish infrastructure and maintain sufficient battery stock.

These operators are increasingly looking to debt financing, and with rising revenue visibility, lenders are beginning to respond by opening up credit lines to this segment.

Charging Infrastructure Still a Credit Outlier

While charging infrastructure is essential to the mass adoption of EVs, Charging Point Operators (CPOs) remain largely outside the scope of current debt financing activity.

Key reasons include:

- High upfront investment in chargers, which are yet to achieve optimal utilization, particularly in public charging networks.
- Increased competition due to the entry of new charger OEMs, many of whom come from the broader electrical manufacturing space.
- Lagging demand, which could trigger market consolidation if supply continues to outpace usage.

Additionally, extended credit periods offered by charger OEMs, especially to large CPOs, help sustain sales but simultaneously reduce the need for these operators to seek external debt in the short term.

Outlook: Growth Ahead, Credit to Follow

India's booming e-commerce sector and strong government backing are acting as key drivers for growth in the commercial EV space.

This momentum is translating into better revenue visibility and growing demand for debt capital, particularly from EV and battery operators.

While credit demand in the charging infrastructure segment remains subdued, this is likely to change. Given the scale of investment required and the foundational role of charging infrastructure in achieving widespread EV adoption, we anticipate substantial growth in credit demand from CPOs in the near future.

BACANCY®

EV Charger Component Manufacturing in India - Tech & Policy Gaps, and How Bacancy Is Bridging Them

Mr. Krunal Patel
Co-founder & CTO, Bacancy Systems

> *Bacancy is developing core components including power converters, control boards, and communication modules using local supply chains and high-grade engineering.*

Recent global shifts, like China tightening exports of rare-earth magnets, have thrown a spotlight on the fragile nature of EV charger component supply chains.

In India, where EV charging infrastructure is critical to the clean mobility mission, an over-reliance on imports may hinder progress and escalate costs.

Let's have a looks at the vulnerabilities in the current supply chain, India's efforts to build local manufacturing, and how Bacancy is playing its part to bridge the gaps.

The Challenge: Supply Chain Vulnerabilities in EV Charger Component Manufacturing

EV chargers rely on several critical parts power units, rectifiers, control boards, communication modules, and rare-earth magnets, among others.

At present, India remains significantly dependent on imports for several of these components, particularly rare-earth materials, which are primarily sourced from China When China imposed export restrictions recently, prices surged and supply became unpredictable, creating risks for India's EV rollout and auto sector growth.

At the same time, India's domestic manufacturing is still growing faced with challenges like limited scale, technology gaps, and infrastructure hurdles.

Critical Components and Import Dependence

EV chargers rely on a combination of complex components, including power modules, rectifiers, control boards, onboard communication units, insulation monitoring devices (IMDs), and cooling systems.

Each component plays a crucial role in ensuring safe, efficient, and compliant charging for a wide range of electric vehicles.

EV chargers rely on:

- Rare-earth magnets especially NdFeB for motors and power units.
- Power electronics (rectifiers, inverters, control boards).
- Communication modules require specialized semiconductors.

India remains heavily dependent on imports, especially from China, which processes over 90% of global rare-earth magnets.

Import Bottlenecks and Disruption

China's April 2025 licensing rules now require rare, earth magnet exports to include detailed end-use certificates vetted by both countries, delaying shipments by 30–45 days.
This delay has already begun to impact EV and automotive production.

Manufacturers like Tata Motors and MG Motor have expressed concerns over potential supply chain slowdowns due to sourcing challenges for key EV charger components. Certain models equipped with advanced onboard chargers and smart communication modules may face production halts by June–July 2025.

Domestic Manufacturing Gaps

Despite India holding around 6.9 million tonnes of rare-earth reserves, it processes only around 10,000 tonnes compared to China's 200,000 tonnes due to limited refining infrastructure.

Moreover, production of advanced electronics and power units remains hampered by weak local supply chains and limited scale.

Policy Momentum

To build local capabilities, the Indian government launched a PLI scheme in 2024 aimed at EV manufacturers investing in component production, offering support worth up to 50% over two years

Additionally, strategic initiatives like KABIL are seeking to secure mineral assets and scale domestic refining.

The Way Forward: India's Push to Localize and Bacancy's Role

The government has recognized these challenges and launched schemes like the Production Linked Incentive (PLI) to encourage local manufacturing of EV components. Investments are flowing in, and new manufacturing hubs are emerging.

Bacancy is working to develop key components like power units, control boards, and communication modules right here in India. By focusing on quality, advanced technology, and leveraging local suppliers, we aims to reduce reliance on imports especially rare-earth materials.

We are also collaborates with research institutions and policymakers to stay aligned with India's vision for EV infrastructure. Through these efforts, Bacancy is helping build a stronger, more reliable EV charger ecosystem supporting the "Make in India" drive and helping the industry navigate uncertain global supply chains

Bacancy's Capabilities

Bacancy is developing core components including power converters, control boards, and communication modules using local supply chains and high-grade engineering.

Bacancy has:

- Innovated designs to reduce reliance on heavy rare-earth magnets by exploring alternate motor architectures.
- Partnered with Indian R&D institutions to enhance manufacturing quality and meet global standards.
- Established assembly lines, yielding localized production capacity at scale.

By replacing imported parts with Bacancy-made units, delivery timelines have improved, and costs dropped in pilot EV charger projects.

These efforts boost domestic value-addition, qualifying for PLI incentives, strengthen supply stability, and reinforce national "Atmanirbharta" in clean mobility tech.

With global supply uncertainties showing no sign of easing, accelerating localization of EV charger components is urgent.

Policymakers can help by strengthening support and addressing bottlenecks in scaling production. Industry players and investors should back homegrown innovators like Bacancy to secure India's path toward a self-reliant EV future.

Bacancy is ready to be a trusted partner in this journey, committed to powering India's clean mobility ambitions.

What's needed:

- Policymakers should fast-track licensing processes, expand PLI reach to critical sub-components, and support domestic refining and rare-earth recycling.
- Industry stakeholders and investors should back firms like Bacancy that prioritize supply-chain resilience and tech excellence.

Bacancy stands ready leveraging local production, innovative design, and strategic partnerships to continue bridging gaps and power India's EV future

Made-in-India EV Diagnostics: A Manufacturer's Perspective

Mr. Sandeep Nair: Software Lead

> *Building our own tools has honestly been a game-changer. We can respond faster, customize better, and most importantly, control the cost.*

Made in India: Powering Up EV Battery Diagnostics

India's EV revolution is well underway. As more electric vehicles hit the roads, the spotlight naturally turns to the heart of every EV that is its battery.

And for us Indians, When we buy a vehicle, we usually care about five key things: price, safety, reliability, longevity, and performance - often in that order.

And with EVs, battery health is quietly becoming the sixth pillar. So, it's no surprise that battery diagnostics are becoming just as important as the battery itself.

While international tools have been around for some time, we're seeing a welcome shift. The "Made in India" initiative is stepping up not just with pride, but with a purpose that is to build tools that suit our needs, our conditions, and our pace.

Why Local Matters?

At Maxwell, as a BMS manufacturer, we've often found ourselves stuck, not because we don't know how to fix or improve something, but because we're dependent on tools made in Japan, China, or Europe. Even a small tweak on the production line can take time and money when we have to rely on overseas OEMs.

Building our own tools has honestly been a game-changer. We can respond faster, customize better, and most importantly, control the cost. And we're sure we're not the only Indian manufacturer who's felt this pain and made the switch.

"Make in India" isn't just a slogan , it's about building an ecosystem that works for us. And when it comes to battery diagnostics, local tools mean:

- More affordability : Advanced tools don't need to come with a premium price tag. Local development brings down costs and makes diagnostics accessible, even to smaller service centers and individual users.
- Better support and faster updates : When your tools are built nearby, you get fixes, updates, and customizations faster. That's less downtime and more confidence for manufacturers and service teams alike.

This push toward local tech is also great news for the Indian economy. Companies like Maxwell and many others working on batteries, BMS, and related software are seeing more investment, more innovation, and more recognition. With government backing and rising EV demand, it's the perfect time to build something truly homegrown.

What We're Building?

We’re not just making tools, we’re building an entire ecosystem, tailored for every step of the EV journey and every stakeholder involved.

Whether it's a field technician diagnosing issues with just a mobile phone, or a production line engineer needing high-speed diagnostics via a desktop tool or test master, we’ve got it covered.

For fleet operators or end customers tracking battery health across dozens or hundreds of vehicles, we offer scalable, easy-to-use solutions as well over the Maxwell Cloud Application.

For us, it's about striking the right balance between value, cost, and ease of use, crafting applications that enable a pragmatic, real-world approach to diagnostics and problem-solving.

Our web, desktop, and mobile platforms are already empowering OEMs and battery developers across India and the rest of the world. And we’re now going a step further into the world of IoT, enabling remote diagnostics and over-the-air (OTA) updates. That means real-time visibility, smarter servicing, and fewer surprises no matter where your vehicles are.

In short? The future of EV diagnostics in India is being built right here, by people who understand Indian roads, Indian needs, and Indian challenges and who are proud to build solutions for them.

Engineering the Transition: How Retrofitting is Re-powering India's Trucks

Mr. Anshu Dewan, Founder & CEO

> *Each of our retrofitted models undergoes a rigorous certification process via ARAI/ICAT, ensuring full compliance with CMVR and AIS-123 Part 3 norms.*

India's journey toward sustainable mobility isn't just about new EVs, it's equally about transforming what's already on the road.

At iX Energy, we believe truck retrofitting is a uniquely Indian innovation imperative. It's where deep-tech engineering meets grassroots impact.

Battery Pack Design for Retrofitted Vehicles

Unlike new EVs, retrofits must work within the constraints of existing chassis and load-bearing designs.
At iX Energy, we custom-design battery packs (typically LFP chemistry) that are crash- safe, modular, and optimized for underbody or behind-cabin mounting—without compromising payload or vehicle balance.

Powertrain Integration

The retrofit process involves replacing the ICE drivetrain with an electric motor (typically PMSM or BLDC), power electronics, and a single-speed transmission. We engineer torque curves that match the performance needs of urban logistics and intra-city freight.
Retention of original differential and suspension ensures cost efficiency and rapid deployment.

Telematics & Smart Diagnostics

Our retrofit kits include an integrated telematics unit with real-time monitoring of SoC, vehicle health, location, and trip diagnostics. This not only improves operational visibility but also lays the groundwork for energy-efficient route planning and predictive maintenance.

Regulatory Certifications

Each of our retrofitted models undergoes a rigorous certification process via ARAI/ICAT, ensuring full compliance with CMVR and AIS-123 Part 3 norms.

Importantly, converted EVs are tested under the same protocols as new electric vehicles—including assessments for electrical safety, electromagnetic compatibility, thermal performance, and structural integrity.

This equivalence in testing underscores a critical point: retrofit EVs, when properly engineered and certified, are just as safe and reliable as factory-built EVs.

At iX Energy, we see this not only as a regulatory requirement, but as a design benchmark.

Design Constraints and Innovation

Working within the envelope of legacy diesel trucks—particularly LCVs like Tata 407, Eicher Pro series, and Mahindra Supro—means tight packaging, thermal management challenges, and variable wiring harnesses.

Our engineering teams have developed adaptable retrofit frameworks that reduce integration time from 60 to 25 days.

Retrofitting isn’t just a lower-cost EV—it’s a leap in applied engineering, where each vehicle becomes a customized platform for sustainable transport.

The Grid Gets Smarter: Why Your Next Car Might Power Your House

Pallavi NB
Content Lead - Kazam

> *Utilities are starting to realize that V2G doesn't just solve their peak demand problems, it potentially eliminates the need for expensive "peaker" power plants that only run a few hours per year. Instead of building a $500 million natural gas plant to handle summer air conditioning loads, they can pay drivers to discharge their cars for a few hours on hot afternoons.*

There's something quietly revolutionary happening in driveways across the world, though you probably haven't noticed it yet. Electric cars, those silent, increasingly common fixtures of modern life, are about to flip one of our most fundamental assumptions about how energy works.

For over a century, the relationship between vehicles and infrastructure has been wonderfully simple: cars consume, infrastructure provides. Gas stations exist to fill tanks. Charging stations exist to fill batteries. Energy flows in one direction, predictably, as it always has.

But what if that's backwards? What if the real infrastructure play isn't building more charging stations, but turning every electric car into a power station?

What Is V2G, Really?

Let’s strip away the jargon. Vehicle-to-Grid is a technology that enables bidirectional energy flow between electric vehicles and the electric grid. In simple terms: not only can an EV draw power from the grid to charge its battery, but it can also send electricity back to the grid when needed.

Think of your EV as a smartphone with a power bank—but much bigger, and connected to an entire city’s energy needs.

How Does V2G Work?

The mechanics are straightforward in concept, but profound in implication:

- **Bidirectional Charger:** Instead of a one-way street, the charger acts more like a roundabout, allowing energy to flow in both directions. When demand is low and electricity is cheap, your car charges up. When demand spikes—perhaps on a hot day, when everyone cranks up their air conditioning—the grid can “borrow” electricity from your car’s battery.
- **Smart Software:** The real magic is in orchestration. Software coordinates when EVs charge or discharge, taking into account the needs of the grid, the owner’s driving patterns, and real-time electricity prices. The aim is to maximize utility for everyone involved.
- **Grid Integration:** Utilities or aggregators manage fleets of EVs as flexible, distributed batteries. In aggregate, thousands of cars can provide services once reserved for large, stationary power plants: stabilizing voltage, storing renewable energy, even preventing blackouts.

The Numbers That Matter

Here's what makes this interesting: the average car sits unused 95% of the time, but the average electric vehicle battery pack holds 60-100 kWh of energy—enough to power a typical home for several days. Scale that up: if just 10% of vehicles were electric and V2G-enabled, you'd have created a distributed battery network larger than all grid-scale storage projects combined.

The timing couldn't be better. Renewable energy's great weakness, its intermittency, becomes manageable when you have millions of mobile batteries that can store excess solar power at noon and feed it back during evening peak demand.

The grid's great challenge, balancing supply and demand in real-time, gets easier when every parking spot is a potential power source.

The Human Infrastructure

But technology is only half the story. The really fascinating part is how V2G changes behavior and business models in ways its creators probably didn't anticipate.

Consider the economics from a driver's perspective: your car doesn't just transport you, it earns money while you sleep.

McKinsey estimates that V2X value pools for an EV school bus, for example, could range from $1,000 to $2,000 per EV annually in Georgia and from $15,000 to $16,000 in Virginia.

Blue Hub Energy and Ferma Energy state that their V2G pilot earns roughly $3,000 per year from local utility company Eversource through its Connected Solutions Demand Response program.

Suddenly, the higher upfront cost of an electric vehicle looks different when it's also a revenue-generating asset.

Or think about resilience: Hurricane season becomes less terrifying when every electric vehicle owner can keep their lights on for days without the grid.

The Texas freeze of 2021, which left millions without power, would have played out very differently in a world where every driveway contained a mobile power plant.

The Network Effects

This is where things get interesting in the way that all good technology stories do, through unexpected network effects and second-order consequences.

Utilities are starting to realize that V2G doesn't just solve their peak demand problems, it potentially eliminates the need for expensive "peaker" power plants that only run a few hours per year. Instead of building a $500 million natural gas plant to handle summer air conditioning loads, they can pay drivers to discharge their cars for a few hours on hot afternoons.

Automakers, meanwhile, are discovering that the real value of their vehicles might not be in selling cars, but in operating energy services.

Ford's Lightning can power your house for three days. GM is marketing their electric trucks as mobile generators for job sites.

Tesla's Autobidder software already trades energy in real-time markets.

The infrastructure implications cascade further: if cars can power buildings, you need fewer electrical upgrades when constructing new developments. If vehicles can provide backup power, data centers and hospitals can reduce their diesel generator footprints. If every parking garage becomes a grid resource, urban energy planning changes fundamentally.

The Friction Points

Of course, nothing this ambitious happens without friction. Battery degradation remains a concern, though early data suggests the impact may be less than feared.

Standardization across manufacturers and utilities is still messy. The economics only work with time-of-use pricing that most consumers don't yet have.

And then there's the deeper question of control: are people comfortable letting their utility remotely manage their car's battery?

The early adopters say yes, but mass adoption will require both better incentives and better interfaces that give drivers meaningful control over their mobile energy assets.

The Invisible Revolution

What strikes me most about V2G is how it represents a particular kind of technological shift, one that makes existing assets dramatically more valuable by connecting them in new ways.

Your car was always a battery; it just wasn't connected to anything that cared about stored energy.

This pattern shows up everywhere in tech: smartphones became powerful not because the hardware improved, but because they gained connectivity.

Houses became "smart" not through better construction, but through better sensors and networks.

Now cars are becoming grid resources not through better batteries, but through better connectivity and software.

The really profound shift here isn't technological, it's conceptual. We're moving from thinking about vehicles as things we own and use occasionally, to thinking about them as nodes in a vast, distributed energy network that happens to sometimes drive us places.

The transition to V2G will likely follow the familiar technology adoption curve: expensive pilots, gradual cost reduction, then sudden ubiquity as network effects kick in. We're somewhere in that middle phase now—past the pure research stage, but not yet at the point where your neighbor's car is powering your house during storms. Give it five years.

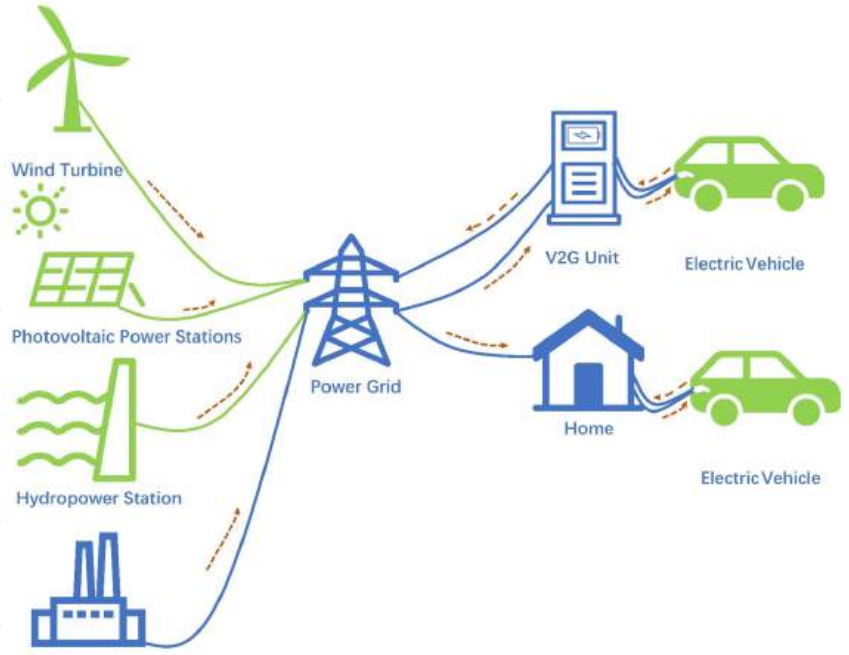


Image from: Scholarly Community Encyclopedia

Mid-Year Investment Pulse Check: India's EV Sector, H1 2025

India's electric-mobility value chain kept investors firmly strapped in during the first six months of 2025. Across the disclosed deals, EV-focused companies pulled in roughly US $2 billion—already eclipsing full-year 2024 flows.

Transportation tech as a whole logged about US $1.6 billion in funding, up 104 % versus H2 2024, with mega-cheques for Erisha E Mobility (US $1 billion) and Green Line (US $275 million) leading the charge.

Deal Volume & Value

Theme	Capital Raised	Signature Deals (H1 2025)
Commercial fleets & logistics	≈ US $1.3 bn	Green Line Mobility – US $275 m (Series A), ZEVO – ₹240 cr (US $29 m), Evera Cabs – US $4 m
Battery & materials	≈ US $140 m	Altmin – ₹750 cr (US $90 m) for an LFP cathode gigafactory; Exide Energy – ₹1.49 bn (US $17 m) for Li-ion cells
Charging & swapping infra	≈ US $30 m	VoltUp – US $8 m seed (1,000 swap stations); Kazam – US $6.2 m (network build-out)
Auto OEM & components	≈ US $125 m	Euler Motors – US $60 m+ Series D; Mahindra's ₹555 cr (US $67 m) stake in SML Isuzu
Green financing / NBFCs	≈ US $50 m	Mufin Green – US $18 m DFC loan; Ecofy – US $12.5 m climate loan

What's Driving the Money Flow?

- **Policy Pulls–** New central incentives are resetting OEM math. The fresh Scheme to Promote Manufacturing of Electric Passenger Cars in India (SPMEPCI) mandates a minimum INR 41.5 bn (US $486 m) investment for global carmakers, with duty concessions on 8,000 imported EVs per year. Expect Hyundai-Mobis, Skoda-VW and others to file proposals before the October window closes.

- **Fleet-first Economics–** Investors chased heavy-duty and last-mile niches where total-cost-of-ownership (TCO) is already favourable. Green Line's US $275 m haul targets LNG-to-EV replacement of 7,000 trucks by 2028, while ZEVO will deploy 10,000 multi-segment EVs in 40 cities.

- **Local Cell & Cathode Race–** With China tightening grip on critical minerals, domestic projects such as Altmin's 30 GWh LFP cathode plant and Exide's 12 GWh cell line signal a pivot from import-heavy CKD kits to a "make where you sell" strategy.

- **EV-as-a-Service (EaaS) & Financing–** Climate-aligned lenders like DFC, Subhkam and Nuveen are filling a gap traditional NBFCs avoided. Structured debt to Euler and blended-finance pools for Mufin and WheelsEMI hint at lower cost of capital for fleet operators.

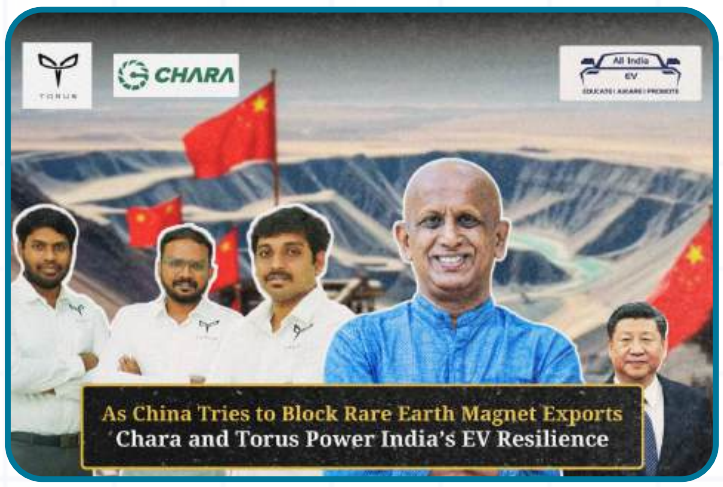
Investor Mix & Ticket Sizes
While seed cheques (US $0.5–3 m) kept ideation alive—Stride Green, Volt14—the median late-stage round shot to US $60 m (Euler, Green Line). Climate/impact funds (Micelio, EM Impact, Nuveen PE Impact) and legacy auto majors (Hero MotoCorp, Mahindra) co-anchored half the large rounds, underscoring strategic capital's rising share.

H2 2025 — What to Watch

- Ather Energy IPO aiming for a US $1.6 bn valuation could become India's first public pure-play EV OEM.
- Battery-recycling scale-ups: Attero targets 30 k t/yr of critical materials, positioning India for closed-loop supply.
- Foreign entrants: Applications to SPMEPCI will clarify whether Tesla remains on the sidelines or jumps in late.
- Policy refresh: The Ministry of Heavy Industries is due to unveil FAME-III contours by Q4; incentives could shift toward e-buses and energy-storage, widening the investable universe.

Bottom Line
Even with macro headwinds and higher risk-free rates, capital remains in "risk-on" mode for assets that de-risk India's EV supply chain. Investors who once wrote cheques for flashy e-scooter brands are now tilting toward cell chemistry, fleet decarbonisation and embedded finance—areas with clearer unit-economics and policy tailwinds.

If the current cadence holds, 2025 could set a new all-time high for EV investments, reshaping not just mobility but India's industrial backbone.



Joint Ventures & Partnerships


murugappa
Murugappa Group Partners with Green Drive Mobility to Deploy 50 EVIATOR 350 L Electric SCVs Nationwide
Murugappa Group, through its clean mobility arm Montra Electric, has joined forces with Green Drive Mobility to deploy 50 units of the EVIATOR 350 L electric Small Commercial Vehicles (SCVs) across the country over the next three months. This partnership marks a significant step towards a cleaner, more efficient future for last-mile and mid-mile delivery, contributing to reduced carbon emissions and a greener India.
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gentari
Shell ENERGY
EV Charging Just Got Easier in India!
Gentari & Shell India Partner for Seamless EV Charging!
"Effective July 10, Shell Recharge charging points will be accessible through the Gentari Go app, and Gentari chargers will be available to Shell Recharge users, giving them access to a network of more than 450 chargers."
Gentari said in a statement.
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VINFAST
BATX
VinFast India & BatX Energies Forge Green Alliance for EV Battery Recycling
VinFast Auto India, the subsidiary of global electric vehicle manufacturer VinFast, has entered into a strategic agreement with BatX Energies, a leading Indian clean-tech company specializing in battery recycling, rare metal recovery and end-of-life battery repurposing
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Efuel & Ticent Energy Power India's EVs!
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CHERY
JSW
Chery x JSW:
A New Powerhouse in India's EV Revolution
China's Chery Auto and India's JSW Group join hands to launch a new EV brand — Made for India, with global ambitions.
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MOEVING
VE COMMERCIAL VEHICLES


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Driving the Future:
e-Sprinto & Damco Solutions Unite
for Smart, Sustainable Mobility
e-SPRINTO
DAMCO
Ensuring Success, Always


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ATHER
Ather Energy Joins Hands with DPIIT
to 'Build in Bharat'
TARUN MEHTA
CEO & Co-founder, Ather Energy
SWAPNIL JAIN
CTO & Co-founder, Ather Energy

New Product Launch


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PIAGGIO
PIAGGIO
Piaggio Unveils New Ape Electrik Models Starting at ₹3.30 Lakh
The Apé E-City FX Maxx is priced at ₹3,30,000 (ex-showroom), while the Apé E-City Ultra is priced at ₹3,88,000 (ex-showroom).
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KINETIC
All India EV
A New Electric Chapter Begins:
Welcome the All-New Kinetic DX EV
The Kinetic DX is priced at INR 1,11,499,
and the DX+ at INR 1,17,499
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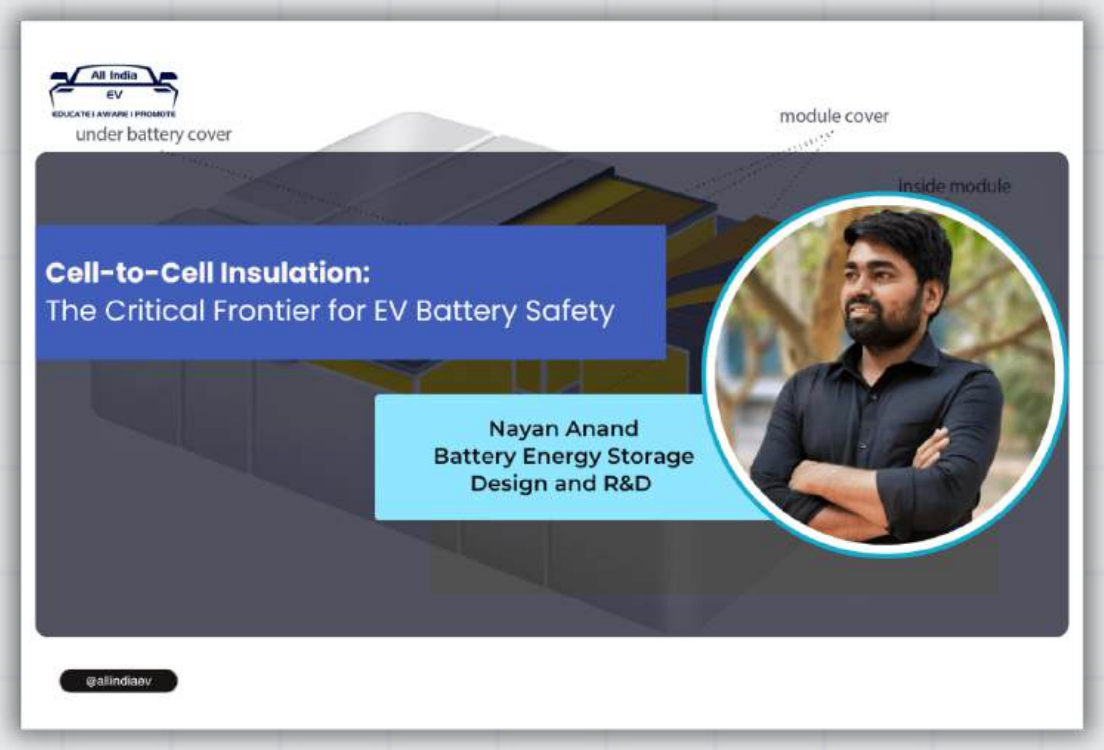
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module cover
inside module
Cell-to-Cell Insulation:
The Critical Frontier for EV Battery Safety
Nayan Anand
Battery Energy Storage
Design and R&D
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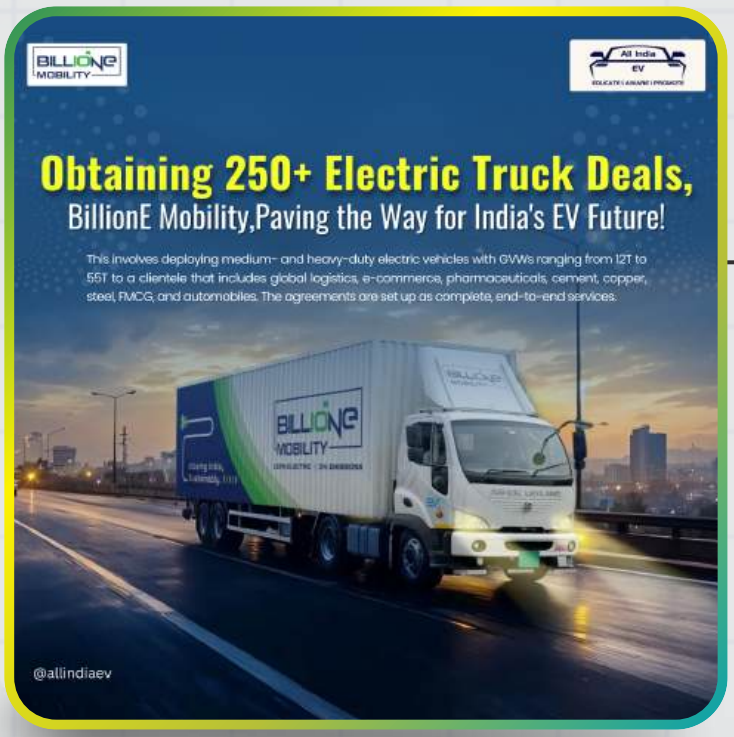
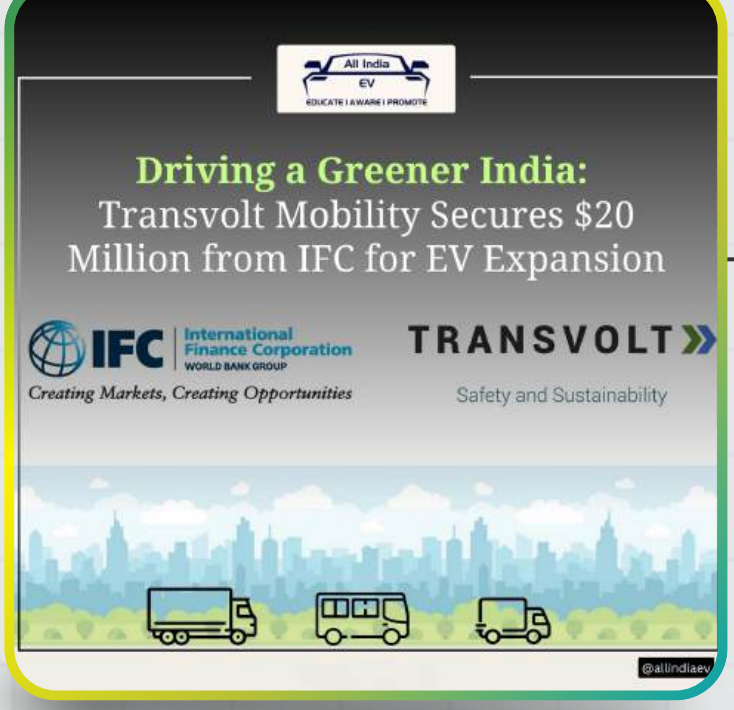
Who Got Funded?






DENSO
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UP's EV Revolution Accelerates!
Denso Invests ₹250 Cr in New Plant
• The investment was confirmed after a strategic meeting between Denso executives and a visiting delegation from UP at Denso 's global headquarters in Kariya, Japan


EVeez
All India EV
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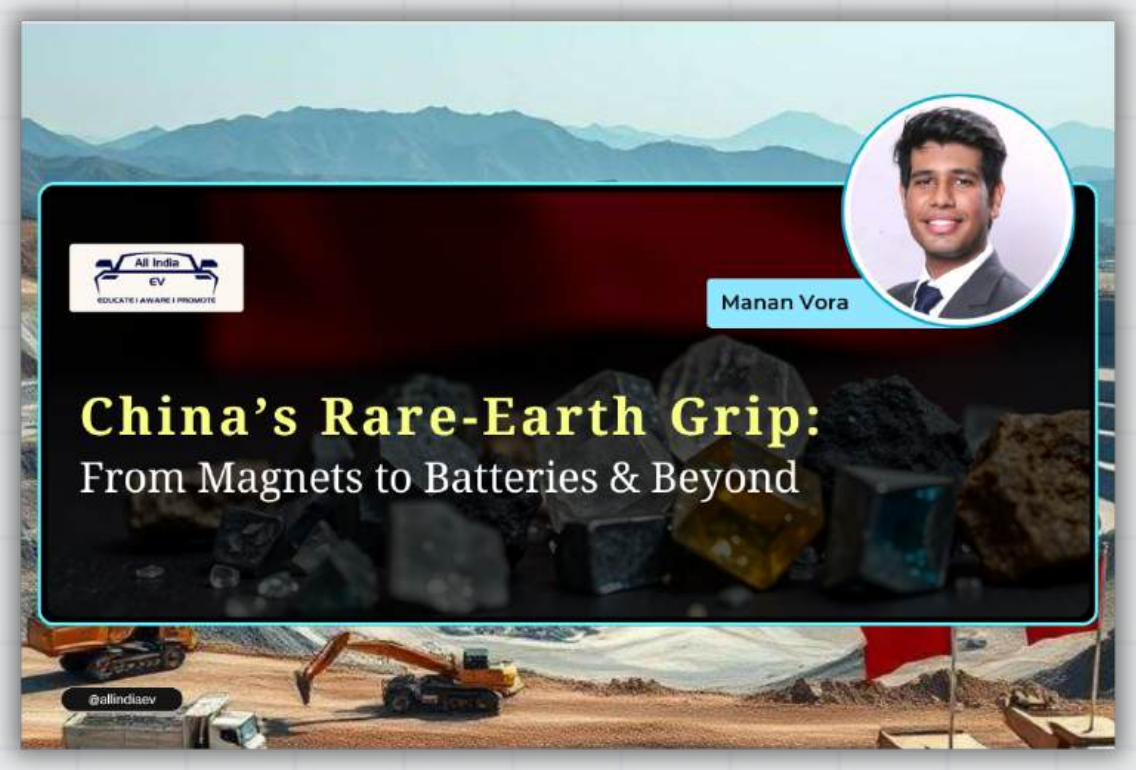
EVeez Accelerates Growth with
$5.4M Series A Funding
• Gurgaon-headquartered EV rental platform EVeez has successfully raised $5.4 million in a Series A funding round! This significant investment will fuel their mission to revolutionize last-mile deliveries with affordable electric 2-wheeler subscriptions for gig workers.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Manan Vora
China's Rare-Earth Grip:
From Magnets to Batteries & Beyond
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OTHER EV UPDATES

- Kinetic Communications inaugurates automated EV component manufacturing line in Pune
- Bengaluru Airport To Get India’s Largest Airside EV Charging Hub – Details Inside
- Japan eyes strategic investments in India’s EV and battery supply chain to counter China’s stranglehold
- India and ARC Electric Forge Alliance to Supercharge EV Adoption Across Tier 1 and Tier 2 Cities
- India will need over 1.9 million public chargers and 275,000 battery swapping stations by 2040: RMI report
- EV charging operators in Tamil Nadu face higher power bills after tariff hike
- Few and far between: Nagpur has just one charging station for every 515 EVs
- Kia India launches EV ecosystem with 11,000 charging points ahead of Carens, Clavis EV launch
- Madhya Pradesh to enhance tourism with new EV charging stations at hotels

- India introduces battery passport system to boost EV safety and exports
- India’s e-truck revolution: Driving economic growth and environmental change
- India needs battery technology beyond lithium, says industry experts
- VinFast plans major expansion in India with 32 dealerships ahead of EV launch
- Tesla, VinFast Set For India EV Faceoff Tomorrow With Showroom Launch And Pre-Bookings
- Maharashtra set to become India’s largest electric vehicle manufacturing hub
- Liberty General Insurance launches custom EV insurance plans for Tesla owners in India
- Electric vehicle market in India set to exceed 7% sales by FY28: CareEdge report
- Maharashtra set to become India’s largest electric vehicle manufacturing hub
- India’s EV revolution: Decoupling from China with rare earth-free powertrains

- Ministry of Heavy Industries amends PM e-Drive scheme to strengthen local manufacturing of EV charging stations
- Tesla’s arrival to transform India’s EV landscape, says Mahindra executive
- Renault waiting for EV ecosystem to mature before making its entry
- Noida introduces 500 electric buses for sustainable urban transport
- Lucknow mandates EV charging points in new housing developments
- Karnataka government drops plan to set up 2,500 public EV charging stations
- 3% of wind and solar capacity targets can charge India’s EV sector by 2032: Report
- Enigma EV sees 300% revenue surge in FY25, targets gig economy with new electric scooters
- Zero tax, full charge: Telangana’s EV policy sparks boom in sales
- India installs 4,557 EV charging stations nationwide, Nitin Gadkari reports

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Our objective is to give our readers a 360° view of the Indian EV industry through our content so that they can understand about the industry in a better way.

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