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MAGAZINE | JULY 2026 | ISSUE NO. 66

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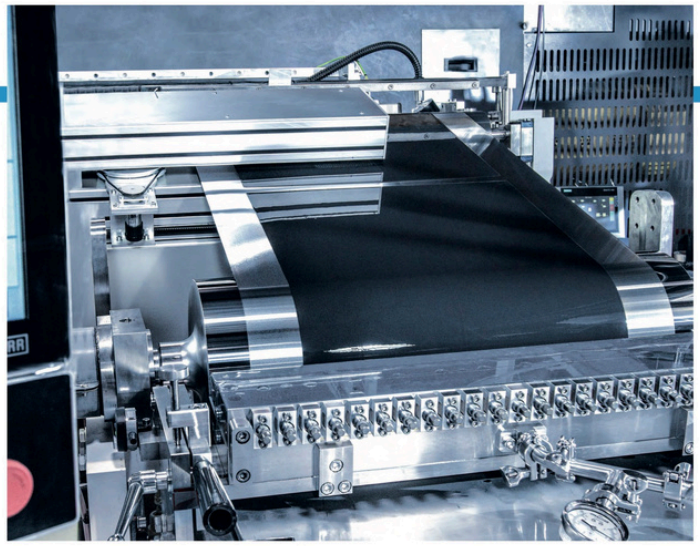

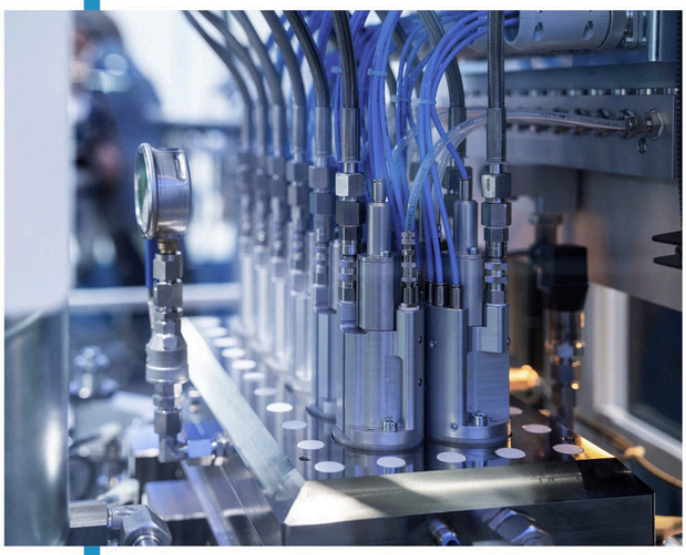

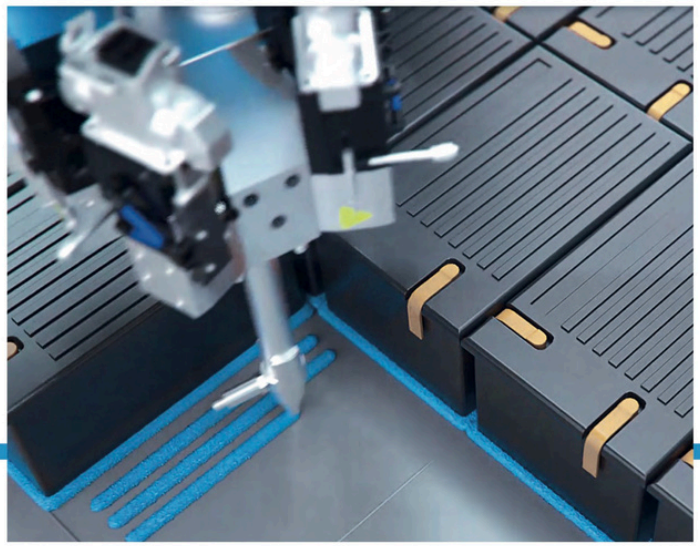

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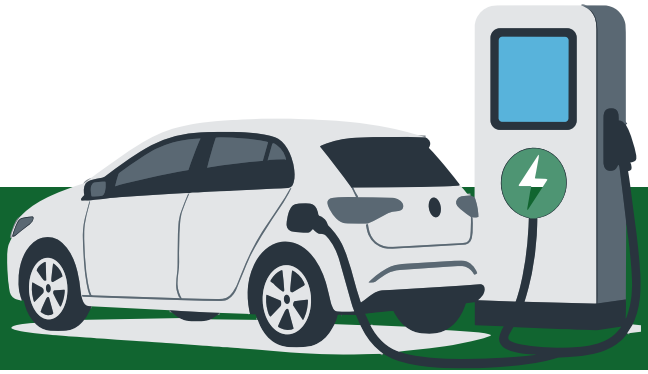

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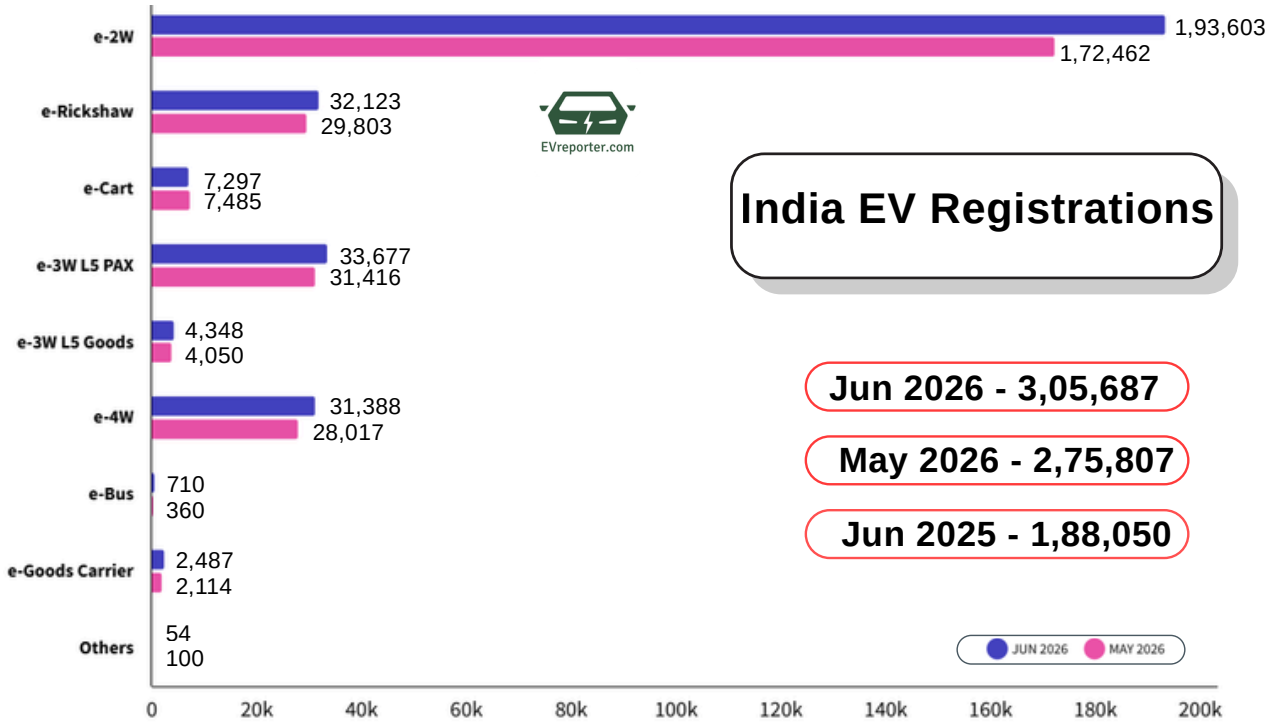
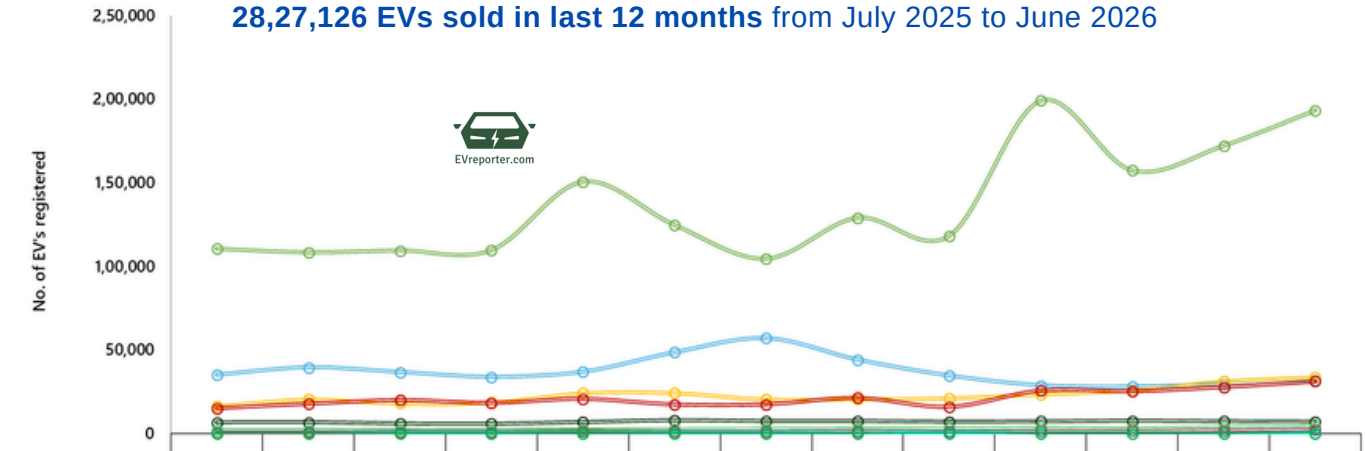
Category-wise Electric Vehicle sales, Jun 2026 | India



Source: Vahan Dashboard as of Jul 2, 2026. Low speed e-2W sales data not included.

'Goods Carrier' refers to N1, N2, N3 vehicles, including LCVs and HGVs, as categorised in Vahan dashboard. 'E-rickshaw' refers to low-speed electric 3Ws (up to 25 kmph) used for passenger transportation. 'E-cart' designates low-speed electric 3Ws (up to 25 kmph) used for goods transportation. 'L5M' stands for passenger 3W L5 vehicles, 'L5N' stands for Cargo 3W L5 vehicles.

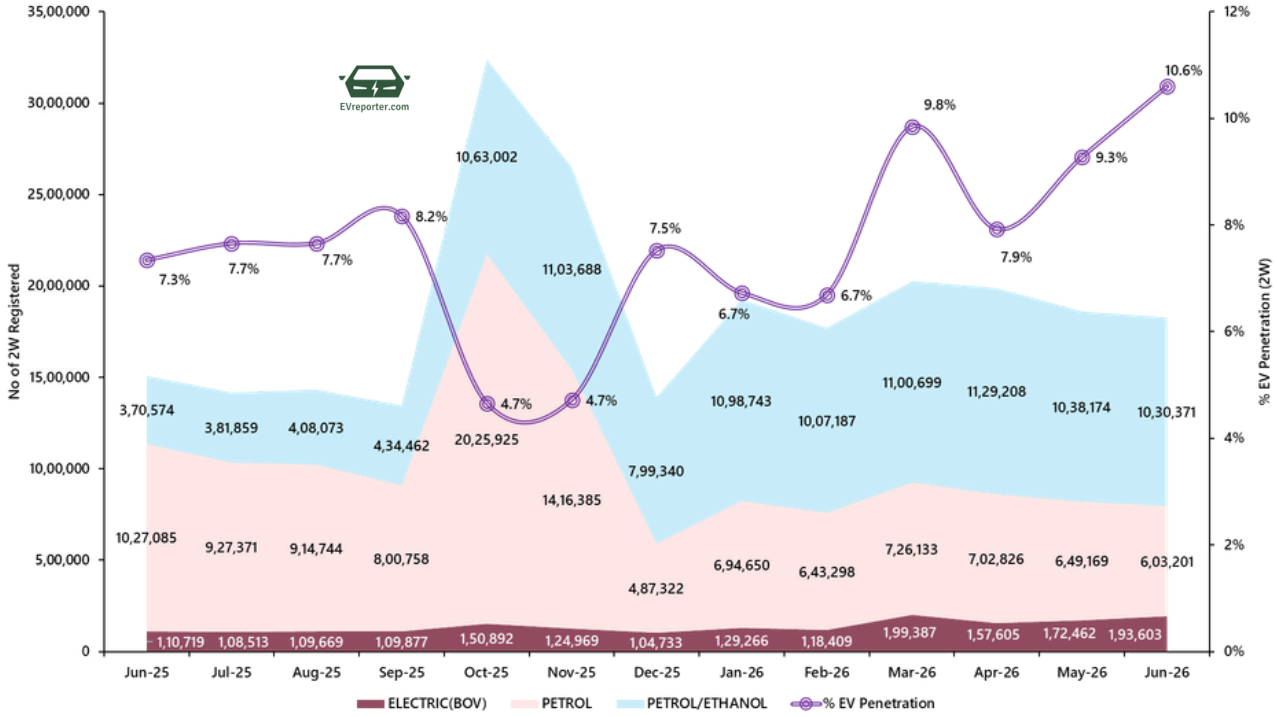
Category wise-Sales Trend from Jun 2025 to Jun 2026



	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26
E-2W	1,10,719	1,08,513	1,09,669	1,09,877	1,50,892	1,24,969	1,04,733	1,29,266	1,18,409	1,99,387	1,57,605	1,72,462	1,93,603
E-rickshaw	35,322	39,770	36,948	34,065	37,089	48,811	57,427	44,432	34,831	28,937	28,146	29,803	32,123
E-3W L5 PAX	16,542	20,659	18,230	18,857	24,326	24,427	20,660	20,816	21,357	23,729	25,974	31,416	33,677
E-cart	6,841	6,888	6,216	6,034	6,985	8,149	7,612	7,654	7,271	7,430	7,748	7,485	7,297
E-3W L5 GOODS	2,097	2,162	2,342	2,485	2,602	2,785	3,002	3,146	3,236	3,762	3,299	4,050	4,348
E-4W	15,298	17,959	20,191	18,534	20,955	17,570	17,659	21,535	16,107	25,973	25,525	28,017	31,388
E-Bus	569	402	431	351	331	428	578	426	658	559	347	360	710
E-Goods Carrier	646	917	1,171	1,261	1,548	1,333	1,443	1,682	1,501	1,937	1,959	2,114	2,487
Others	16	58	40	61	149	29	31	14	22	161	177	100	54
TOTAL	1,88,050	1,97,328	1,95,238	1,91,525	2,44,877	2,28,501	2,13,145	2,28,971	2,03,392	2,91,875	2,50,780	2,75,807	3,05,687

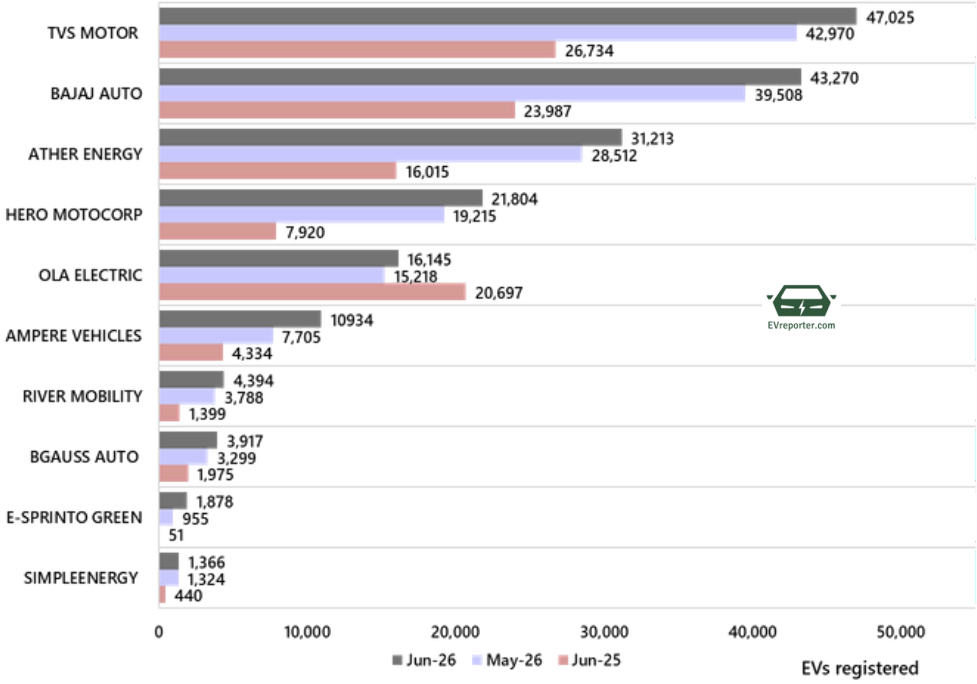
Source: Vahan Dashboard as of Jul 2, 2026. Low speed e-2W sales data not included.

Fuel wise 2-Wheeler Sales Trend, Jun 2025 - Jun 2026



Source: Vahan Dashboard as of Jul 2, 2026. PAN India Data. Low speed e-2W sales data not included.

E-2W Sales in Jun 2026 | Leading OEMs

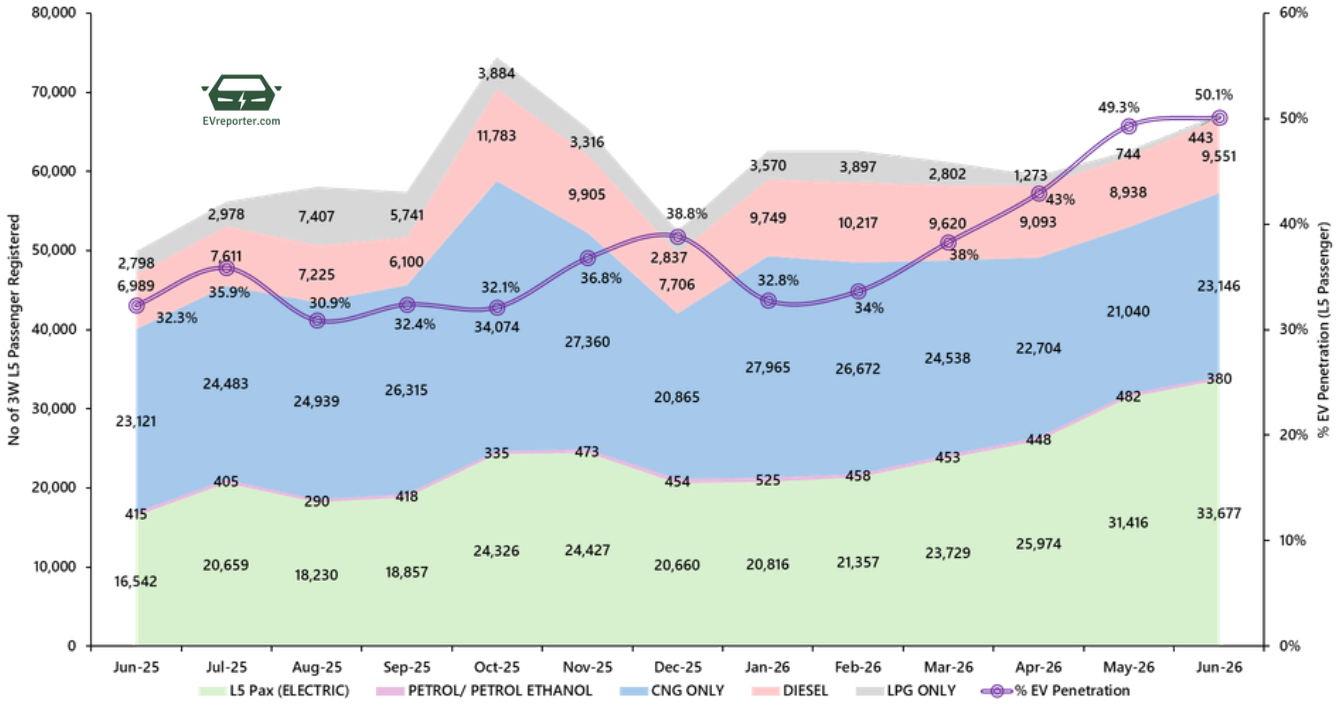


	% Growth (Y-o-Y)	% Growth (M-o-M)
TVS MOTOR	75.9%	9.4%
BAJAJ AUTO	80.4%	9.5%
ATHER ENERGY	94.9%	9.5%
HERO MOTOCORP	175.3%	13.5%
OLA ELECTRIC	-22%	6.1%
AMPERE VEHICLES	152.3%	41.9%
RIVER MOBILITY	214.1%	16%
BGAUSS AUTO	98.3%	18.7%
E-SPRINTO GREEN	-	96.6%
SIMPLEENERGY	210.5%	3.2%

Source: Vahan Dashboard as of Jul 2, 2026. PAN India Data. Low speed e-2W sales data not included.

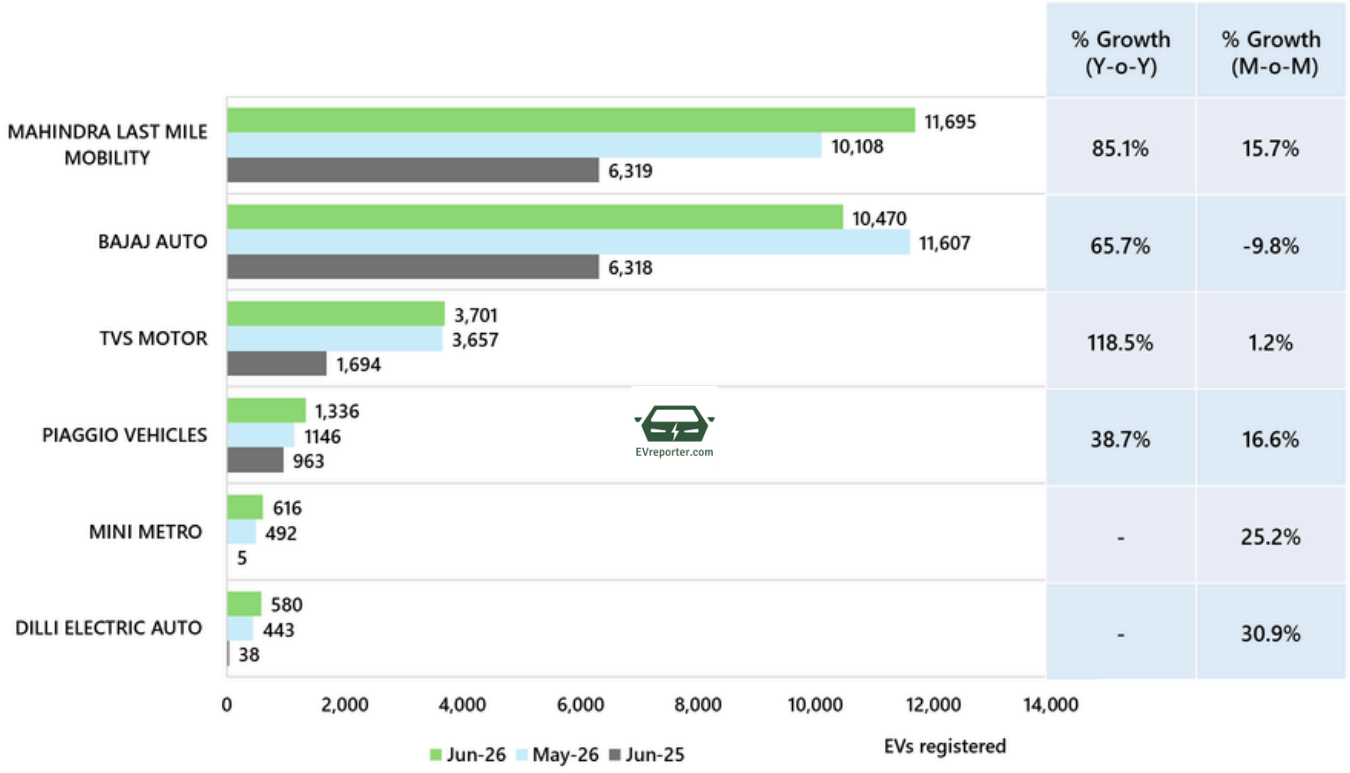
For deeper EV sale trends - state-wise, city-wise (70 cities), Top performing RTO data and OEM-wise performance, check out the EVreporter Data Portal here.

Fuel-wise 3W **L5 Passenger** Sales Trend | Jun 2025 - Jun 2026



Source: Vahan Dashboard as of Jul 2, 2026. PAN India Data

E-3W L5 Passenger Sales | Leading OEMs

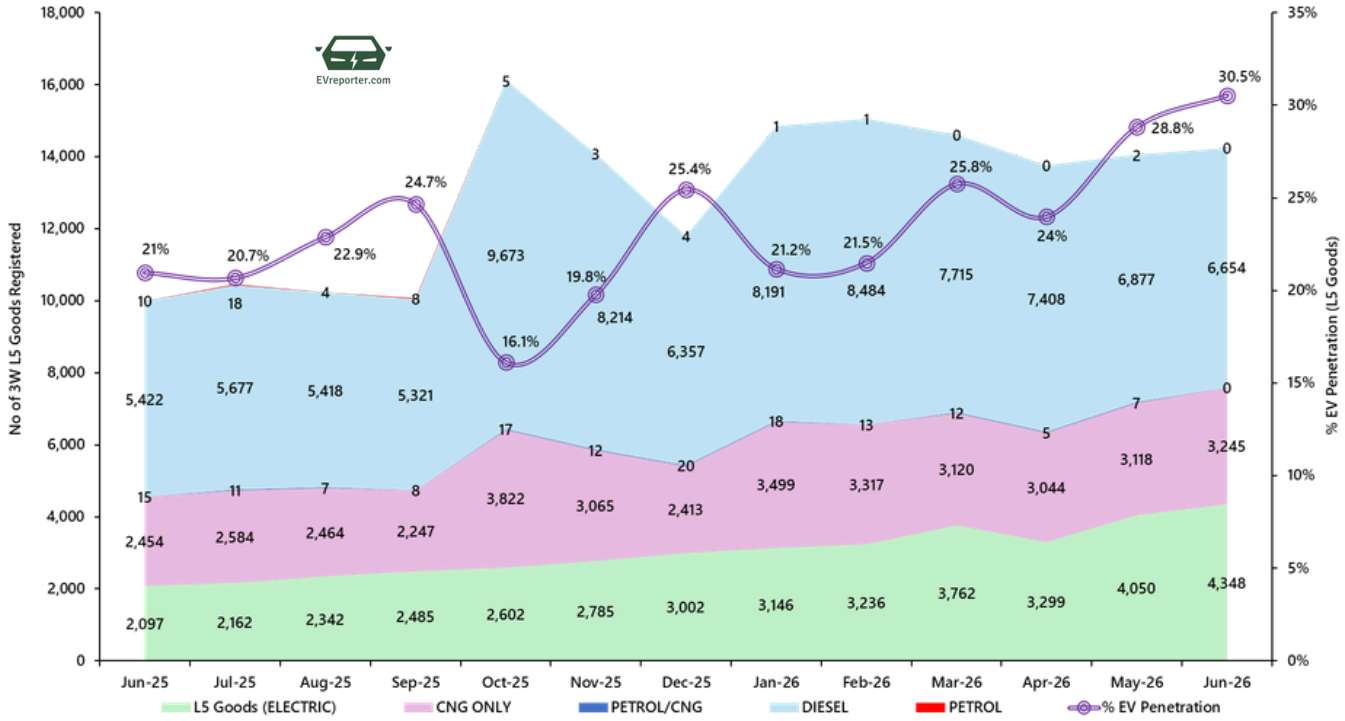


	% Growth (Y-o-Y)	% Growth (M-o-M)
MAHINDRA LAST MILE MOBILITY	85.1%	15.7%
BAJAJ AUTO	65.7%	-9.8%
TVS MOTOR	118.5%	1.2%
PIAGGIO VEHICLES	38.7%	16.6%
MINI METRO	-	25.2%
DILLI ELECTRIC AUTO	-	30.9%

Source: Vahan Dashboard as of Jul 2, 2026. PAN India Data

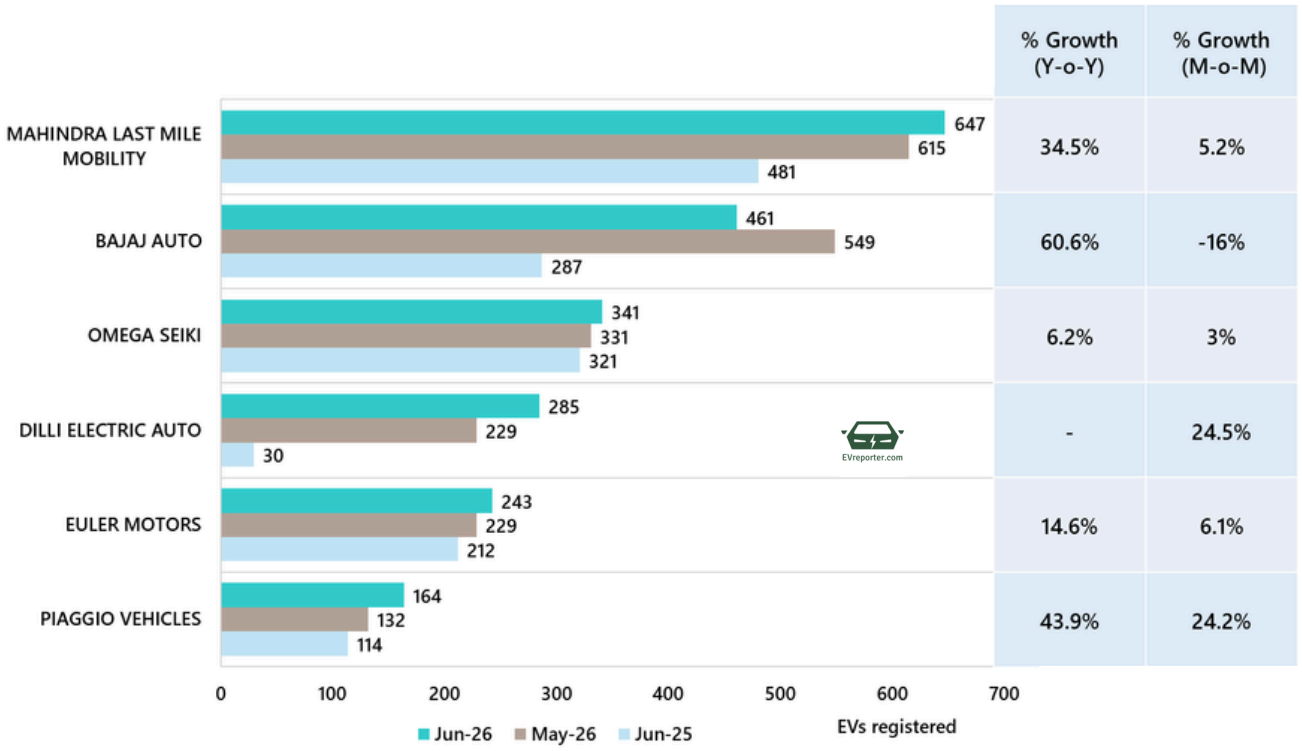
For deeper EV sale trends - state-wise, city-wise (70 cities), Top performing RTO data and OEM-wise performance, check out the EVreporter Data Portal here.

Fuel wise 3W **L5 Goods** Sales Trend | Jun 2025 - Jun 2026



Source: Vahan Dashboard as of Jul 2, 2026. PAN India Data

E-3W Goods L5 Sales | Leading OEMs



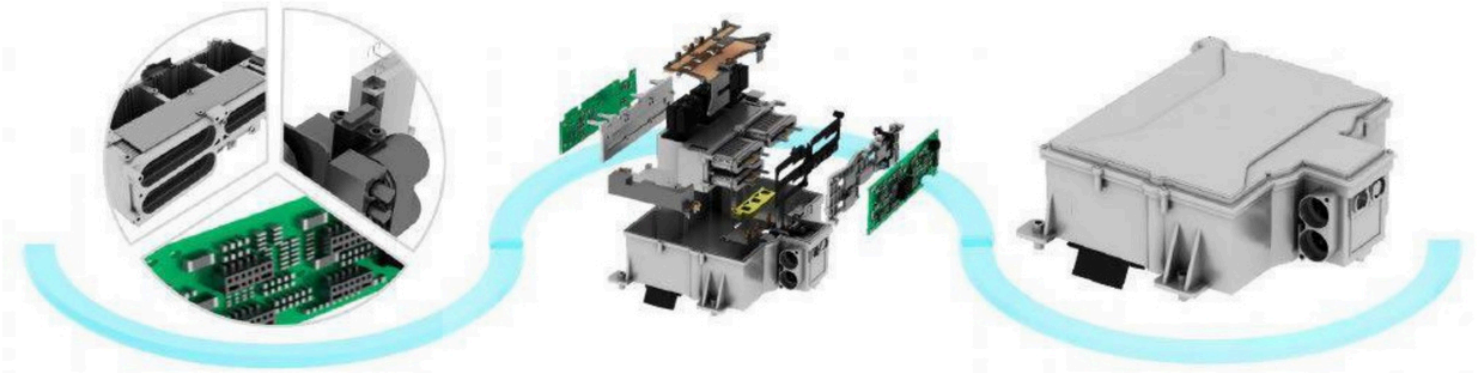
	% Growth (Y-o-Y)	% Growth (M-o-M)
MAHINDRA LAST MILE MOBILITY	34.5%	5.2%
BAJAJ AUTO	60.6%	-16%
OMEGA SEIKI	6.2%	3%
DILLI ELECTRIC AUTO	-	24.5%
EULER MOTORS	14.6%	6.1%
PIAGGIO VEHICLES	43.9%	24.2%

Source: Vahan Dashboard as of Jul 2, 2026. PAN India Data

For deeper EV sale trends - state-wise, city-wise (70 cities), Top performing RTO data and OEM-wise performance, check out the EVreporter Data Portal here.

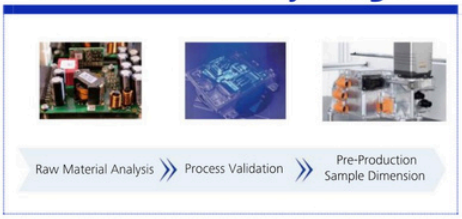
Power Electronics R&D, Production Process, and Quality Management

Enhancing quality control of power electronics devices throughout the full manufacturing cycle



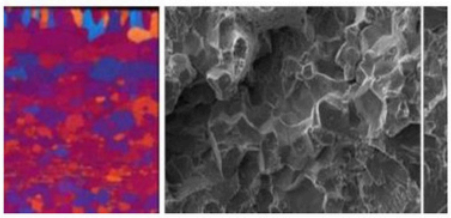
ZEISS Power Electronics Quality Solutions

Power Electronics Structured Parts and Assembly Design

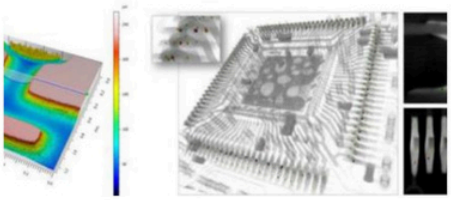


Power Electronics Manufacturing Process

Raw material analysis

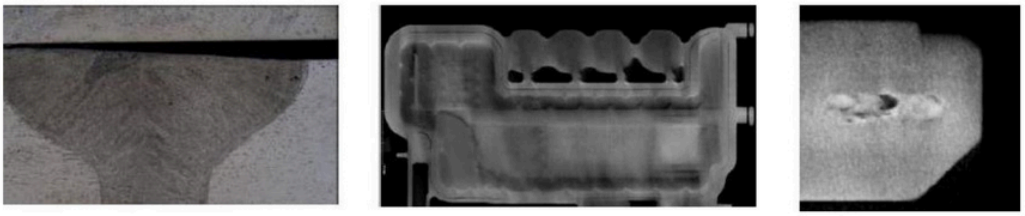


Semiconductor packaging quality analysis and inspection

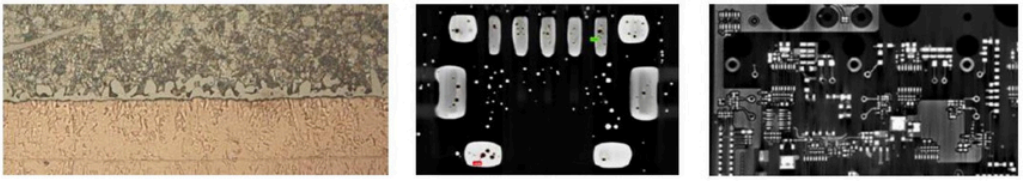


Prototype part dimension inspection and mechanical strength analysis

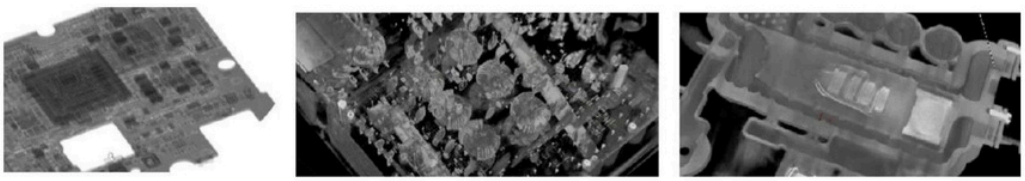
Welding and connection process quality control and assessment



PCBA and board-end connector overall quality evaluation



Internal electrical performance connection quality at the assembly level



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* Temperature rise measured under laboratory test conditions.

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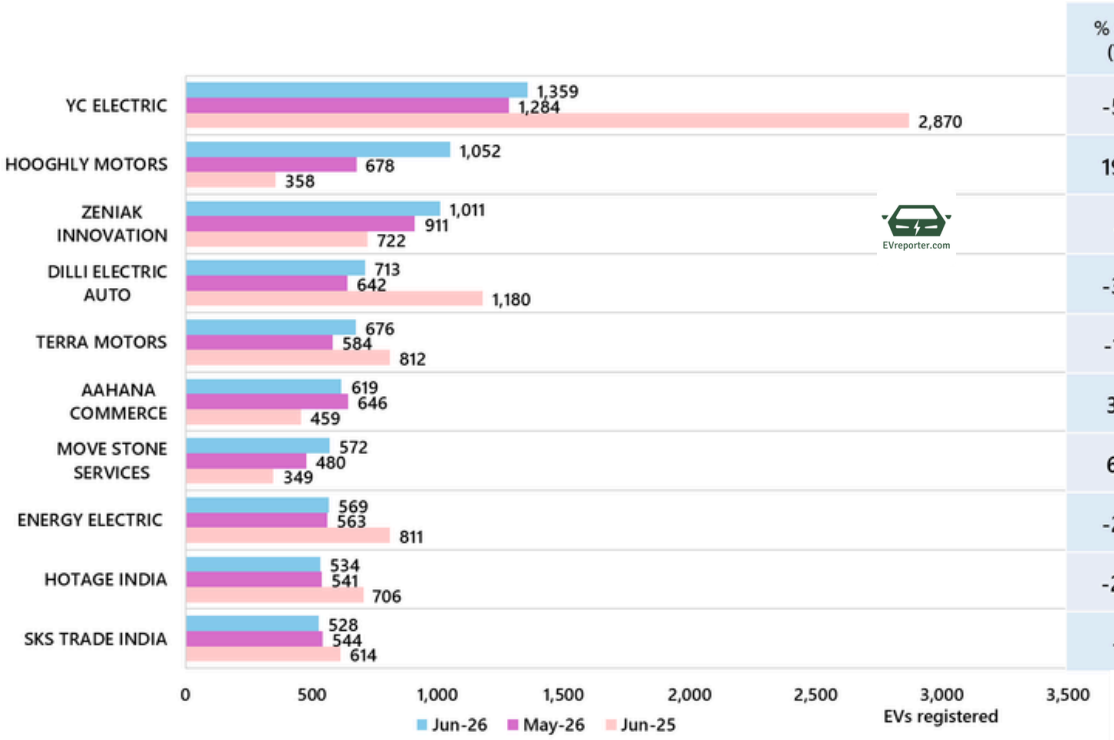
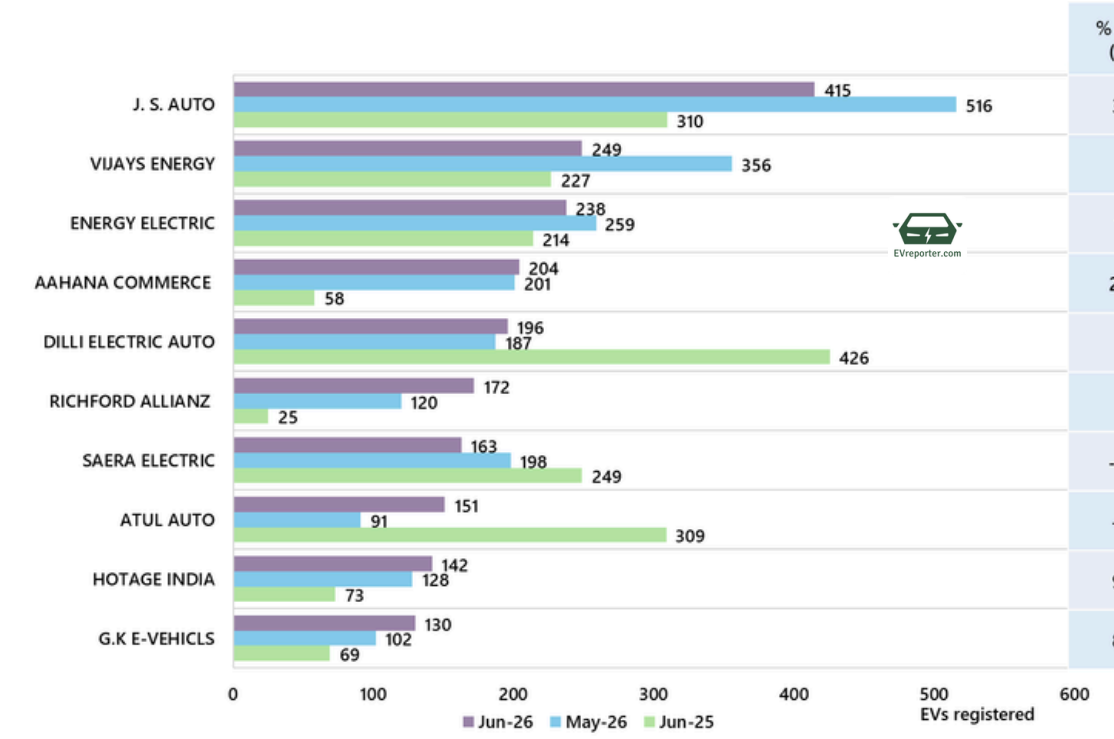
E-rickshaw Sales Trend by OEM | Jun 2026



	% Growth (Y-o-Y)	% Growth (M-o-M)
YC ELECTRIC	-52.6%	5.8%
HOOGHLY MOTORS	193.9%	55.2%
ZENIAK INNOVATION	40%	11%
DILLI ELECTRIC AUTO	-39.6%	11.1%
TERRA MOTORS	-16.7%	15.8%
AAHANA COMMERCE	34.9%	-4.2%
MOVE STONE SERVICES	63.9%	19.2%
ENERGY ELECTRIC	-29.8%	1.1%
HOTAGE INDIA	-24.4%	-1.3%
SKS TRADE INDIA	-14%	-2.9%

Source: Vahan Dashboard as of Jul 2, 2026.

E-cart Sales | Leading OEMs | Jun 2026

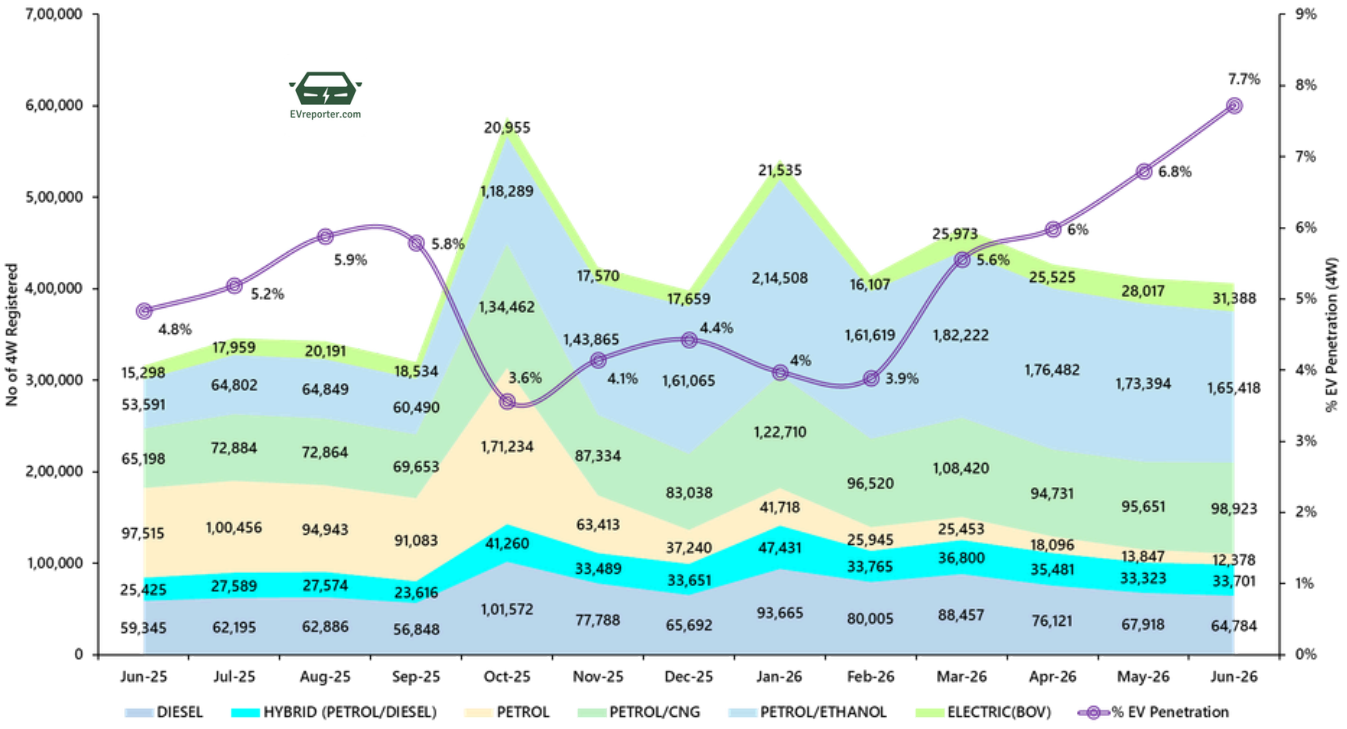


	% Growth (Y-o-Y)	% Growth (M-o-M)
J. S. AUTO	33.9%	-19.6%
VIJAYS ENERGY	9.7%	-30.1%
ENERGY ELECTRIC	11.2%	-8.1%
AAHANA COMMERCE	251.7%	1.5%
DILLI ELECTRIC AUTO	-54%	4.8%
RICHFORD ALLIANZ	-	43.3%
SAERA ELECTRIC	-34.5%	-17.7%
ATUL AUTO	-51.1%	65.9%
HOTAGE INDIA	94.5%	10.9%
G.K E-VEHICLS	88.4%	27.5%

Source: Vahan Dashboard as of Jul 2, 2026.

For deeper EV sale trends - state-wise, city-wise (70 cities), Top performing RTO data and OEM-wise performance, check out the EVreporter Data Portal here.

Fuel wise Car Sales Trend | Jun 2025 - Jun 2026



Source: Vahan Dashboard as of Jul 2, 2026.

Electric Car Sales Trend by OEM | Jun 2026

S No.	Makers	Jun-26	May-26	Difference	% Change	Market Share Jun-26
1	TATA MOTORS	12,074	10,875	1,199	11%	38.5%
2	MAHINDRA & MAHINDRA	7,682	6,552	1,130	17.2%	24.5%
3	JSW MG MOTOR INDIA	5,807	5,268	539	10.2%	18.5%
4	MARUTI SUZUKI INDIA	1,902	1,663	239	14.4%	6.1%
5	VINFAST AUTO INDIA	1,398	1,277	121	9.5%	4.5%
6	BYD INDIA	868	753	115	15.3%	2.8%
7	BMW INDIA	489	374	115	30.7%	1.6%
8	KIA INDIA	448	453	-5	-1.1%	1.4%
9	HYUNDAI MOTOR INDIA	348	474	-126	-26.6%	1.1%
10	MERCEDES -BENZ AG	234	217	17	7.8%	0.7%
11	VOLVO AUTO INDIA	36	33	3	9.1%	0.1%
12	TESLA INDIA MOTORS	35	36	-1	-2.8%	0.1%
13	TOYOTA KIRLOSKAR	32	0	32	-	0.1%
14	OTHERS	35	42	-7	-16.7%	0.1%
	TOTAL	31,388	28,017	3,371	12%	100%

Source: Vahan Dashboard as of Jul 2, 2026.

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OEM wise Electric Bus Sales | Jun 2026

S No.	Makers	Jun-26	May-26	Difference	% Change	Market Share Jun-26
1	SWITCH MOBILITY	175	52	123	236.5%	24.6%
2	PMI ELECTRO MOBILITY	157	50	107	214%	22.1%
3	OLECTRA GREENTECH	127	86	41	47.7%	17.9%
4	JBM ELECTRIC VEHICLES	118	157	-39	-24.8%	16.6%
5	PINNACLE MOBILITY	52	5	47	940%	7.3%
6	VE COMMERCIAL	42	0	42	-	5.9%
7	TATA MOTORS	20	3	17	566.7%	2.8%
8	AEROEAGLE AUTOMOBILES	11	3	8	266.7%	1.5%
9	OTHERS	8	4	4	100%	1.1%
	TOTAL	710	360	350	97.2%	100%

Source: Vahan Dashboard as of Jul 2, 2026.

OEM wise E-Goods Carrier Sales | Jun 2026

S No.	Makers	Jun-26	May-26	Difference	% Change	Market Share Jun-26
1	TATA MOTORS	1,093	886	207	23.4%	43.9%
2	EULER MOTORS	700	564	136	24.1%	28.1%
3	MAHINDRA LAST MILE MOBILITY	315	265	50	18.9%	12.7%
4	SWITCH MOBILITY AUTOMOTIVE	129	160	-31	-19.4%	5.2%
5	TIVOLT ELECTRIC VEHICLES	79	67	12	17.9%	3.2%
6	VE COMMERCIAL VEHICLES	51	61	-10	-16.4%	2.1%
7	SANY HEAVY INDUSTRY INDIA	41	15	26	173.3%	1.6%
8	IPL TECH ELECTRIC	32	23	9	39.1%	1.3%
9	ENERGY IN MOTION	21	26	-5	-19.2%	0.8%
10	JUPITER ELECTRIC MOBILITY	8	10	-2	-20%	0.3%
11	OTHERS	18	37	-19	-51.4%	0.7%
	TOTAL	2,487	2,114	373	17.6%	100%

'Goods Carrier' refers to N1, N2, N3 cargo vehicles, including LCVs and HGVs, as categorised in Vahan dashboard.

Source: Vahan Dashboard as of Jul 2, 2026.

EV Penetration for Different Vehicle Category Sales in India

Category	Jun-26	May-26	Jun-25
2W	10.6%	9.3%	7.3%
3W L5M	50.1%	49.3%	32.3%
3W L5N	30.5%	28.8%	21%
4W	7.7%	6.8%	4.8%
Goods Carrier	3.4%	2.9%	1.1%

Source: Vahan Dashboard as of Jul 2, 2026.

'Goods Carrier' refers to N1,N2,N3 cargo vehicles, including LCVs and HGVs, as categorised in Vahan dashboard. 'L5M' stands for passenger 3W L5 vehicles, 'L5N' stands for Cargo 3W L5 vehicles.

ICE vs EV Sales & Penetration Trend

- India's EV Sales Trend for Jun 2026 shows sizable growth in monthly sales volume.
- Jun 2026 EV penetration for 2Ws climbed to 10.6% (highest ever), up from 7.3% in Jun 2025.
- The **passenger vehicle category recorded the highest EV penetration to date at 7.7%**.
- **The L5 Passenger segment recorded its highest-ever EV penetration of 50.1%.**
- The Goods Carrier category is gathering pace, with EV penetration rising to 3.4% from 1.1% the year before.
- **Bajaj Auto** attributed **23% of its Jun 2W sales to EVs**, while EV penetration for TVS 2Ws was over 13%. Over 98% of **Mahindra Last Mile Mobility**'s passenger 3W sales were electric. Nearlt 62% of TVS Motors' passenger 3W sales were electric.
- ~84**% of JSW MG Motor India's** sales in Jun 2026 were EVs. EV penetration in the car category stood at **21%+ for Tata Motors**, **29%+ for BMW India** and **14.4% for Mahindra.**

This section aims to showcase the part of EV sales for top-selling OEMs in the two-wheeler, three-wheeler and passenger vehicle categories.

India's Top 2W OEMs | ICE vs EV Sales for Jun 2026

S No.	Maker	Total Sales Jun-26	ICE	EV	% EV
1	HERO MOTOCORP	4,71,990	4,50,186	21,804	4.6%
2	HONDA MOTORCYCLE	4,52,489	4,51,683	806	0.2%
3	TVS MOTOR	3,59,043	3,12,018	47,025	13.1%
4	BAJAJ AUTO	1,88,030	1,44,760	43,270	23%
5	SUZUKI MOTORCYCLE INDIA	1,04,922	1,04,401	521	0.04%
6	ROYAL-ENFIELD	94,245	94,185	60	0.1%
7	INDIA YAMAHA MOTOR	67,654	67,519	135	0.2%
8	ATHER ENERGY	31,213	0	31,213	100%
9	OLA ELECTRIC	16,145	0	16,145	100%
10	AMPERE VEHICLES	10,934	0	10,934	100%

Source: Vahan Dashboard as of Jul 2, 2026.

India's Top 3W Pax Auto OEMs | ICE vs EV Sales for Jun 2026

S No.	Maker	Total Sales Jun-26	ICE	EV	% EV
1	BAJAJ AUTO	35,025	24,555	10,470	29.9%
2	MAHINDRA LAST MILE MOBILITY	11,919	224	11,695	98.1%
3	PIAGGIO VEHICLES	6,122	4,786	1,336	21.8%
4	TVS MOTOR	5,996	2,295	3,701	61.7%
5	ATUL AUTO	1,211	1,002	209	17.3%
6	MINI METRO	616	0	616	100%
7	DILLI ELECTRIC AUTO	580	0	580	100%
8	OMEGA SEIKI	402	0	402	100%

Source: Vahan Dashboard as of Jul 2, 2026.

For EV sales, including e-goods carriers (LCV / HCV categorisation), state-wise, city-wise (70 cities), top-performing RTO data, and OEM-wise performance, check out EVreporter Data Portal here.

India's Top 3W Goods Auto OEMs | ICE vs EV Sales for Jun 2026

S No.	Maker	Total Sales Jun-26	ICE	EV	% EV
1	BAJAJ AUTO	5,506	5,045	461	8.4%
2	PIAGGIO VEHICLES	2,764	2,600	164	5.9%
3	ATUL AUTO	1,358	1,282	76	5.6%
4	MAHINDRA LAST MILE MOBILITY	1,024	377	647	63.2%
5	TVS MOTOR	411	289	122	29.7%
6	OMEGA SEIKI	341	0	341	100%
7	DILLI ELECTRIC AUTO	285	0	285	100%
8	EULER MOTORS	243	0	243	100%

India's Top 4W OEMs | ICE vs EV Sales for Jun 2026

S No.	Maker	Total Sales Jun-26	ICE	EV	% EV
1	MARUTI SUZUKI INDIA	1,67,312	1,65,410	1,902	1.1%
2	TATA MOTORS	56,576	44,502	12,074	21.3%
3	MAHINDRA & MAHINDRA	53,356	45,674	7,682	14.4%
4	HYUNDAI MOTOR INDIA	43,971	43,623	348	0.8%
5	TOYOTA KIRLOSKAR MOTOR	28,349	28,317	32	0.1%
6	KIA INDIA	23,020	22,572	448	1.9%
7	SKODA AUTO VOLKSWAGEN INDIA	7,997	7,997	0	-
8	JSW MG MOTOR INDIA	6,929	1,122	5,807	83.8%
9	HONDA CARS INDIA	4,807	4,807	0	-
10	RENAULT INDIA	3,840	3,840	0	-
11	NISSAN MOTOR INDIA	2,743	2,743	0	-
12	BMW INDIA	1,679	1,190	489	29.1%
13	MERCEDES-BENZ INDIA	1,604	1,370	234	14.6%
14	VINFAST AUTO INDIA	1,398	0	1,398	100%

AsahiKASEI
Creating for Tomorrow

Engineering plastics solutions for E-mobility applications

XYRON™ modified polyphenylene ether [mPPE]

Solution for AIS156 Thermal Propagation & Fire Test

Excellent flammability class

Grade/UL94	V-0 (mmt)	5VA (mmt)
XYRON™ 340Z	0.75	**2.5**
XYRON™ 540Z	0.75	**2.5**
XYRON™ 443Z	0.75	**2.5**
XYRON™ G601Z	1.50	**2.0**

Burn Test for Li-B applications[4]

FR PC/ABS

Burn temp: 850°C
Burn time: 0 min 58 secs
Burn through: Yes
Drip: No

XYRON™ 540Z

Burn temp: 850°C
Burn time: 2 min 19 secs
Burn through: Yes
Drip: No

XYRON™ 443Z

Burn temp: 850°C
Burn time: 2 min 58 secs
Burn through: Yes
Drip: No

Burn test method:
Angle of flame: 20°, Thickness: 3 mm
Flame: Blue tip at the center of the plate
Time start: When the fire is turn on
Time stop: When burn through happen

[5]Advantages of XYRON™

Value proposition		Property	XYRON™	PC	PC/ABS
Energy efficiency due to low weight		Low specific gravity	●	●	●
Structural integrity for large and complex designs		Dimension stable	●	●	●
Battery Safety AIS-156	Fire resistance test with thin plate	Thickness[4]	●	●	●
	1m drop test	Impact strength[1]	●	●	●
	Direct/indirect contact of water	Impact strength (after aging) [2]	●	●	●
	Thermal shock test	Impact strength (after aging) [3]	●	●	●

Note:
1 – Notched Charpy Impact ISO179
2 – Notched Charpy Impact ISO179 after conditioned using Internal Method: -20°C to 85°C/85%RH for 10 cycles.
3 – Notched Charpy Impact ISO179 after conditioned using AIS-156 – Thermal shock: -40°C to 80°C for 10 cycles.
4 – Asahi Kasei Method
5 – Result shown are estimates comparison conducted by Asahi Kasei

● Excellent
● Good

AsahiKASEI
XYRON™ LEONA™ TENAC™ TENAC™-C
PRODUCTS

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Stator Winding with Rotor Shaft Insertion	Copper Coils	End laminations

Focused on processing superior grades in thickness 0.20 / 0.25 / 0.30 / 0.35 / 0.50 mm
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Modern testing and inspection facilities incorporates epstein test frame, franklin tester, rotor analyzer, stator core tester, optical cmm and more.

Capacity to punch 2000 mt/month of finished laminations.

Not Just **Laminations** - Total **Solutions**

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Electric 4-Wheeler Market Landscape in India

Q1 FY 2026 - 2027

Fuels	Q1 (FY-27)	Q4 (FY-26)
Petrol (E20)	515,294	558,349
Petrol (E20)/CNG	264,416	262,315
Diesel	208,823	262,127
Electric BOV	84,930	63,615
Petrol (E20)/ Hybrid	56,307	65,120
Petrol	44,321	93,116
Strong Hybrid EV	27,572	30,925
Petrol /CNG	24,889	65,335
Petrol /Hybrid	15,671	18,551
Others	5,372	7,129
% EV Penetration	6.8%	4.5%
Total	1,247,595	1,426,582

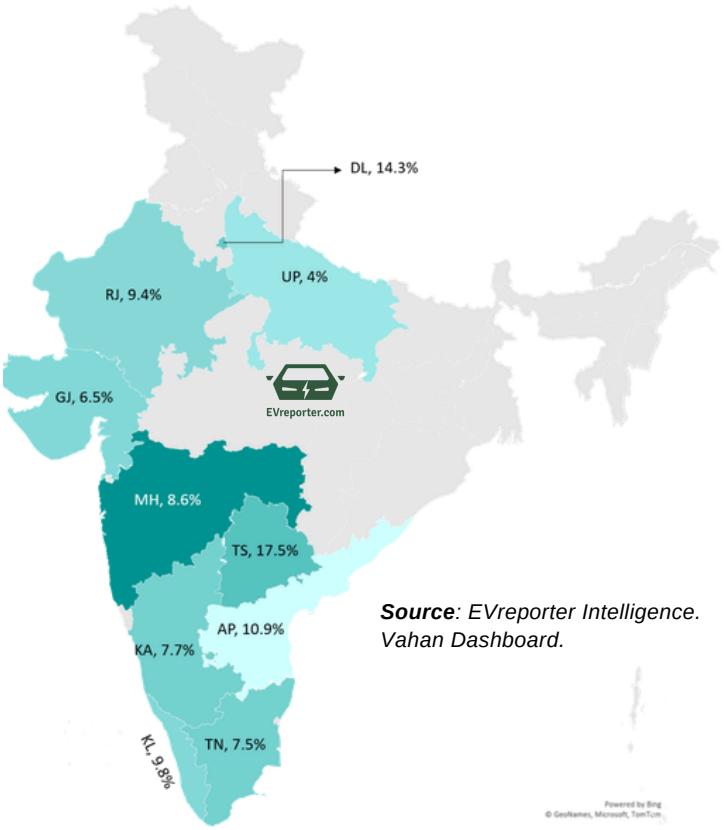
***Source**: EVreporter Intelligence. Vahan Dashboard.*

- India recorded 1.25 million car registrations in Q1 FY26-27, down from 1.43 million in Q4 FY25-26, reflecting a 12.5% QoQ decline.
- **Electric 4-wheeler sales** bucked the overall trend, increasing from 63,615 units in Q4 FY-26 to **84,930 units in Q1 FY-27,** growing **33.5% QoQ.**
- **EV penetration** improved significantly QoQ, from 4.5% to **6.8%.**

Q1 FY26-27 reflects a market in transition, where overall passenger vehicle sales moderated, but electrification continued to gain pace, supported by rising EV adoption and improving market penetration.

State-wise Sales Trend for e-4Wheelers | Q1 FY26-27

- **Maharashtra** led the electric PV market in Q1 FY26-27, registering 12,623 units EV sales, followed by **Telangana** (8,561 units) and **Delhi** (7,957 units).
- **Telangana recorded the highest EV penetration** among the top states at 17.5%, followed by Delhi (14.3%) and Andhra Pradesh (10.9%), indicating stronger EV adoption in passenger vehicle sales.
- Despite the second-highest overall 4-wheeler sales (1,34,639 units), Uttar Pradesh reported a relatively low EV share of just 4%.



***Source**: EVreporter Intelligence. Vahan Dashboard.*

States	Total e-4W Sold Q1 FY-27	Total 4W Sold Q1 FY-27	% EV Share
Maharashtra	12,623	1,46,459	8.6%
Telangana	8,561	48,975	17.5%
Delhi	7,957	55,551	14.3%
Karnataka	7,253	94,011	7.7%
Tamil Nadu	7,200	96,231	7.5%
Gujarat	6,639	102,370	6.5%
Kerala	6,605	67,456	9.8%
Rajasthan	6,388	68,137	9.4%
Uttar Pradesh	5,409	1,34,639	4%
Andhra Pradesh	3,239	29,805	10.9%
Others	13,056	4,03,961	3.2%
Total	84,930	1,247,595	6.8%

Leading Electric Car OEMs | Q1 FY-27 vs Q4 FY-26

S No	OEMs	Q1 (FY-27)	Q4 (FY-26)	% QoQ Growth
1	Tata Motors	32,339	25,156	28.6%
2	Mahindra & Mahindra	20,159	13,693	47.2%
3	JSW MG Motor	16,527	15,141	9.2%
4	Maruti Suzuki India	4,900	1,460	235.6%
5	Vinfast Auto India	3,978	1,630	144%
6	BYD India	2,181	1,211	80.1%
7	Hyundai Motor	1,387	1,324	4.8%
8	Kia India	1,307	1,278	2.3%
9	BMW India	1,211	1,203	0.7%
10	Mercedes-Benz	570	288	97.9%
	Others	371	1,231	-69.9%
	Total	84,930	63,615	33.5%

- **Tata Motors remained the EV market leader** with 32,339 units, though its market share dropped slightly from 39.5% to 38.1%.
- **Mahindra** strengthened its position, grew 47.2% QoQ and increased its **market share from 21.5% to 23.7%.**

***Source**: EVreporter Intelligence. Vahan Dashboard.*

- **Maruti Suzuki India and VinFast India posted the highest QoQ growth** at 235.6% and 144%, respectively; Mercedes-Benz recorded a 97.9% increase.
- **Tata Motors, Mahindra & Mahindra, and JSW MG Motor together accounted for 81.3% of total EV passenger vehicle sales in Q1 FY-27.**

100,000 SWAPS A DAY — AND COUNTING: INSIDE SPIRO'S PLAN TO ELECTRIFY AFRICA'S ROADS

*Spiro has built something rare in the EV landscape — a company that does not just sell electric vehicles in Africa, but has constructed the infrastructure layer that makes mass adoption possible. As **Founder of SPIRO**, Africa's largest electric vehicle company, **Gagan Gupta** has overseen a network that now spans over 2,500 battery-swapping stations across Africa, completing upwards of 100,000 swaps every day — a number growing at 15% month-on-month.*

In this conversation with EVreporter, Gupta speaks about what it takes to run a high-frequency energy network at scale, why battery swapping is the model that works for Africa's motorcycle taxi economy, and what the continent's EV transition looks like from the inside.

Congratulations on the recent $215 million fundraise for Spiro*. You've now raised over $343 million. What has changed in the company's approach since you started?

**The interview was conducted on 10 Jun 2026. The company has raised an additional USD 55M since then.*

I think we started this company and got it to a pretty significant stage before we started attracting capital. From Spiro's perspective, what we are trying to achieve is to build the entire EV ecosystem — the swapping infrastructure, the right dealership network, the right O&M network — all with one purpose: to ensure that the customer gets the best experience and is able to save compared to what they were spending on ICE bikes.

The additional capital allows us to accelerate — in terms of densifying the network and opening new markets — but the trajectory remains the same. **We are growing at about 15% on a month-on-month basis, and that continues.**

In which areas do you find the most acceptance and viability for electric mobility?

EVs are quite viable compared to ICEs. **Today, a Spiro bike is cheaper than an ICE bike, and its operating costs are lower — I would say in 90% of the markets we operate in.**

The challenge with adoption is that people need assurance that they can get energy for their bikes without waiting 2.5 hours. A boda-boda driver wants to do his business. So we had to build something that would give the customer the same experience they have when driving an ICE product. And, the total cost of ownership has to be lower.

What Spiro has done is put the network first, so the users will come. In **Rwanda**, where we have a dense network, 90% of all bikes sold are electric — and **90% of that 90% is Spiro**. In Kenya, 20–30% of all bikes sold monthly are now electric, and our share of that is close to 90%. Network requires significant capital to deploy, but deploy first, and the customers follow.

You've completed over 30 million battery swaps across 2,500-plus stations. What does it take to run a reliable swap network — the parts that aren't obvious from the outside?

At Spiro, we are currently doing about 100,000 swaps a day, growing at about 15% month-on-month. We expect that to go close to a million swaps a day next year. In any high-frequency business like this, a few things are critical.

- First, ensure the wait time for users is very low.
- Second, your entire tech stack needs to work — you have integration with mobile money platforms, with the battery, with the swap session itself. That requires significant investment in backend technology.
- Third, you need to be able to guide riders to where they should be going to charge — where battery availability is, which station, which network.
- And you have to manage your entire battery ecosystem. You have so many batteries in the float, and managing that requires significant operational depth, aided by technology.

That's why we have invested heavily in the tech side. **We have close to 200 people in the Pune office and development centres in Kenya and Nigeria**, to ensure we're updating and improving based on everything we learn.

On the subject of float — what kind of ratios do you work with? For example, the number of bikes in a location versus the number of batteries you need to keep at swapping stations?

These ratios evolve over time. When you go to a market, you want to ensure good availability because you may not be operationally efficient at that point. But as the market matures, the ratios completely change. In the beginning, you're still not sure which swap station users will come to most, or what the offtake pattern will look like. So you populate on a standard basis and keep adjusting. It takes about 18–24 months to arrive at the right ratio for a given market.

There's also the dependency dynamic in battery swapping — once a rider is on your platform, they need your batteries and your stations. How do you think about openness versus lock-in in the ecosystem?

We are very clear that we will open our ecosystem. If another bike player wants to come and use our batteries, we are happy. That said, we will not allow the ecosystem to be compromised because someone wants to plug and play with a lesser or incompatible battery. Imagine a battery incident — a fire — and the entire sector takes a hit. We have no problem with openness; we just have a responsibility to protect the ecosystem.

You've been explicit that most EVs deployed in Africa were designed elsewhere, without a full understanding of local conditions. What were the design failures that made this a concrete problem for you — and what led to the acquisition of Coexlion?

When we first launched, we launched with a product that was not fully suited for the market. We got a lot of feedback from customers, and we modified the product. The current product design belongs to us — it is based entirely on that customer feedback. Our first real market test was in Togo and Benin, and we like to test at scale to ensure we're launching the right product.

With the acquisition of Coexlion, the idea is to build an in-house product team that constantly thinks about what we can do better for customers and which other products we can bring. As we expand into more geographies, customisations will be required, and having that engineering capability in-house means we can move faster.

What does Spiro's market performance look like across your leading markets?

Currently, **we sell about 10,000 bikes per month.** I don't look at market share versus electric — I look at market share versus the entire motorbike sector.

In **Rwanda**, we have about 80% market share in new bikes sold. In **Kenya** and **Uganda**, we are at about 20–25% of all new bikes sold, and that's what's relevant to us. Going forward, I see EV adoption growing much higher. The tailwinds from fuel prices are really helping.

Africa imports $180 billion worth of mobility products, of which $150 billion is fuel alone, and these countries are 100% dependent on fuel imports. That makes the case for e-mobility very compelling.

You have assembly plants in Kenya, Rwanda, and Uganda. What does "Made in Africa for Africa" mean in practical terms?

I am a very strong believer in ensuring we add all the value in the countries and the continent we operate in. My other business, **ARISE IIP**, is built around exactly that — value addition within the continent. Today, we are already producing some components locally. **By Q2, all our components will be made on the continent.** We are building four mega factories to ensure every component is manufactured in Africa.

More importantly, because of the scale of batteries Spiro needs, **two cell manufacturers have agreed to build cell manufacturing plants in Africa.** Spiro is not just deploying EVs — it is driving the entire EV manufacturing ecosystem. Next year, every component will be made on the continent. Within 24 months, cells will be produced here as well. This will be the biggest transformation from a materials and industrial perspective that Spiro would have driven.

Can you share more about how you are looking to support local Cell Manufacturing?

Spiro will not be doing it directly. It will be our partners through a platform called A2MP — the Africa Mineral Metal Processing Platform — which I founded and focuses on mineral and metal processing on the continent. That platform is partnering with current global suppliers to come and set up a manufacturing base in Africa. By the end of September, we should be able to say more

How significant is India as a supply base for Spiro?

We have some IoT suppliers from India, but I haven't seen any other significant component supply come out of India yet. For us, it is very important that they are willing to relocate their supply base, not just fulfil orders. I have had discussions with some players in the past, but all of them were interested only in getting orders and supplying from India — not relocating. We want people to manufacture in Africa.

What are your plans for expanding the product portfolio — perhaps into 3Ws or cargo?

We will be bringing some new form factors. We haven't announced it yet, but come Sep–Oct, I think you'll be surprised by what we've been working on. It will be a game-changer for the industry.

How does the Pune Global Technology Centre fit into your engineering efforts?

Pune is the EV hub of India — the best talent is available there. The whole idea was to build a centre where all software development can happen. We have the development centre in Pune, and development centres in Kenya and Nigeria. Pune develops the products; Kenya and Nigeria implement and feed back local knowledge. It plays a very important role in our technology journey.

What else should people know about Spiro?

First, we are very open to partnerships with companies that want to use our battery-swapping network. We are happy to partner with them. Second, Spiro is not just about motorbikes — it is about an ecosystem we are developing, and that is really pushing the boundaries of how you look at the EV space. And lastly, you should go ahead and put money in Spiro. It's going to be the most successful EV company.

ES-CM06

Built for LEV Discharge Systems
Smaller. More Power.

As LEVs continue to evolve toward higher power, longer range, and greater system integration, discharge connectors must carry higher currents while maintaining reliable performance within limited installation space. They must also withstand demanding operating conditions such as vibration, rain, water immersion, and high-pressure washing. **The ES-CM06 is built for this challenge.**

With an integrated power and signal design and optimized structure, ES-CM06 delivers high-current performance in a more compact package, providing a reliable and efficient discharge connection solution for LEV battery packs and power systems.

High Reliability

As vehicle power increases, connectors need to support stable high-power output while operating reliably in harsh environments.

- **150A Continuous Current with <40K Temperature Rise** — Stable high-power output.
- **IP67 / IP69K Protection** — Designed for harsh environments.

With 150A continuous current and a peak current of up to 200A for 60 seconds, the ES-CM06 meets the power demands of high-performance LEV platforms. Its IP67 / IP69K protection in mated condition, together with IP67B on the panel side, helps reduce connection failure risks in demanding applications.

Compact Design

20% Smaller than Comparable Products
— More battery pack space.

For LEV platforms, every millimetre matters.

Through structural optimization, ES-CM06 is ~20% smaller than comparable products while maintaining 150A continuous current capability. Its compact design helps free up more battery pack space, supports higher-capacity battery designs, and opens the door to longer vehicle range and improved system integration.

Easy Operation

Assist Handle Design — Faster, easier plug & unplug.

Beyond electrical performance, connector usability also affects maintenance efficiency.

ES-CM06 features an Assist Handle Design combined with a rotary ejection mechanism, helping reduce connector insertion and extraction force. This makes battery replacement and daily operation faster, easier, and more efficient.

Designed for Harsh Environments

ES-CM06 is designed not only for high-current output, but also for long-term reliability in demanding LEV applications.

Product Name	ES-CM06
Rated Operating Voltage	160V DC (Power) 80V DC (Signal)
Rated Current	2*150A+8*5A
Peak Current	200A 60S
IP Rating	IP67/ IP69K Mated; IPXXB Plug Side; IP67B Panel Side
Mechanical Life	3000 Cycles
Operating Temperature	-40°C~105°C
Wiring Method	Solder (Power) Solder (Signal) / Plug Side; Busbar (Power) Solder (Signal) / Panel Side
Wiring Range	Power 3AWG/Max; Signal 20AWG/Max

Built for High-Performance LEVs

ES-CM06 is more than a high-current connector. It is a discharge connection solution combining High Reliability, Compact Design, and Easy Operation.

For LEV platforms pursuing higher power, longer range, and greater system integration, ES-CM06 helps vehicle manufacturers, battery manufacturers, and system integrators achieve stable and reliable power connections within limited installation space.

Nepal's Electric Car Revolution — and What's Next for 2Ws

The landlocked Himalayan nation of Nepal has achieved something that most of the world is still working toward: **nearly 80 per cent of all new personal cars sold in the country are electric.**

The Shift in Cars

The dramatic electrification of personal vehicles in Nepal is not a result of a tech boom or a wealthy consumer class. Nepal has no domestic vehicle manufacturing to speak of — the **country depends almost entirely on imports**, or on low-level assembly operations for brands like Honda, TVS, Bajaj, Royal Enfield, Suzuki and Hyundai. Personal cars have long been considered a luxury, burdened by import taxes on ICE vehicles that range from 248 to 360 per cent. And yet, it is precisely this punishing tax structure — combined with Nepal's reliance on **hydropower for its electricity** — that created the conditions for an EV tipping point. With EV-friendly tax brackets, electric cars became meaningfully cheaper than their ICE counterparts. Chinese EV brands — **led by BYD and Changan Auto** — swept in, displacing the earlier incumbents, Toyota, Suzuki, Mahindra, and Tata.

Two-wheelers are Set to Join the Trend

The two-wheeler story is at an earlier but equally compelling stage. Two-wheelers vastly outnumber cars in Nepal — **annual 2W sales run between 250,000 and 300,000 units, compared to just 13,000–14,000 cars**. EV penetration in this segment is around 5 per cent today, but momentum is building. Rising global fuel prices play a significant role.

Suryansh Vaidya from Vaidya Energy, the official distributor of Ather Energy scooters in Nepal, reports significant month-on-month sales increases over the past few months. He notes that average monthly sales have risen from 300 to 800 units over the last two months. To understand the forces shaping this transition and where it is headed, EVreporter spoke to Suryansh Vaidya.

As part of the **Vaidya Energy | VOITH Group**, his family has been at the heart of Nepal's automotive trade for decades, holding distribution rights for Toyota, Morbidelli and Benelli.

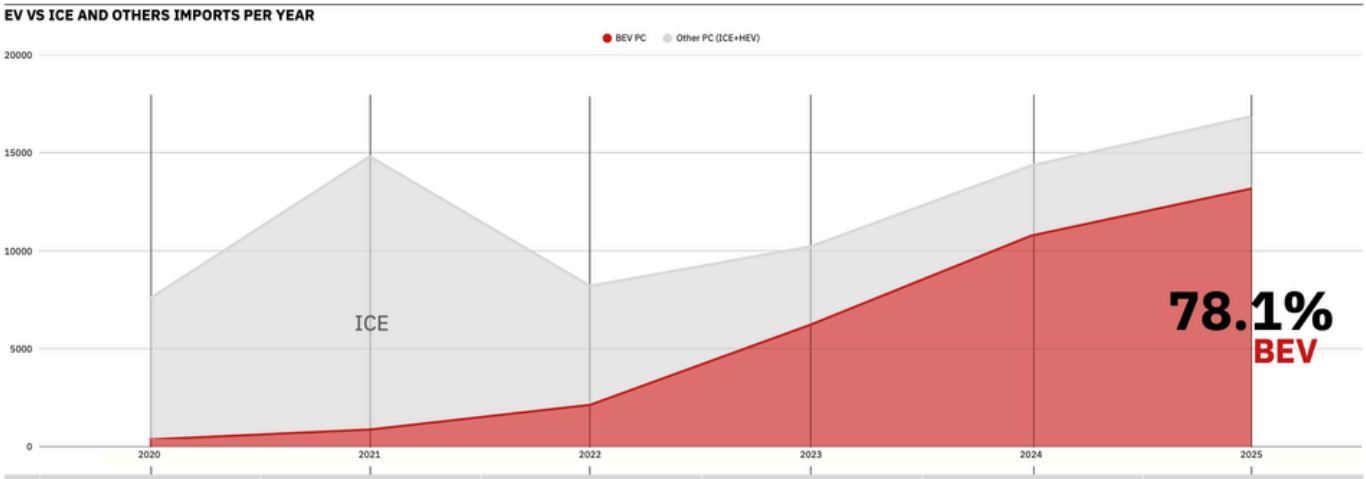
Today, he is also the distributor for Ather Energy electric scooters in the country, and the group is preparing to present **Ultraviolette** to the Nepalese market.

Vaidya brings a rare dual perspective: he has seen Nepal's roads from the vantage point of a legacy ICE distributor, and he is now actively building the EV ecosystem of tomorrow. In this conversation, he reflects on the policy decisions and market forces that drove Nepal's e-4W revolution, the emerging story in 2Ws and his outlook for Nepal's electric leap.

What are the current tax brackets for ICE Cars and Electric Cars in the country? And what has been the influence of the tax structure on the shift in Nepal's car market?

Tax in Nepal has historically been very high on ICE-fueled vehicles, and it was categorised as a luxury tax. This has always been the case as far as I can remember, and, in my opinion, it was never reinvestigated, as the kingdom and the governments it funded were happy with that level of income. EV tax initially, when the first electric cars started coming in, was minuscule and compared to ICE almost nonexistent, leading to the mass adoption.

IMPORTS OF ICE VS BEV OVER FROM 2021 ONWARDS



	2020	2021	2022	2023	2024	2025
ICE	7280	14179	6089	4012	3608	3693
BEV	363	869	2143	6734	10766	13,171
BEV%	4.75%	5.77%	26.03%	62.67%	74.90%	78.10%

GOVERNMENT STRATEGY
Nepal's large tax breaks for EV four-wheelers are a deliberate policy tool to electrify transport and reduce dependence on imported fossil fuels. The country imports nearly all petroleum, costing roughly USD 3–4 billion a year (about 8–10% of GDP), while over 99% of electricity generation comes from hydropower, making EVs powered largely by domestic renewable energy. In its official climate commitments (NDCs), the Government of Nepal has stated clear targets to electrify the vehicle fleet, aiming for around 25% of private and 20% of public four-wheelers to be electric by 2025, rising sharply by 2030 and beyond. EV tax incentives therefore align mobility growth with national goals of energy self-sufficiency, lower fuel imports, cleaner cities, and long-term economic resilience.

The major reason for this is that our largest imports are fossil fuels, which account for around 10% of our GDP, and we are now approaching energy sufficiency, all via hydropower.

Every year after 2018, we saw the number of BEV vehicles increase little by little, and it exploded post-COVID pandemic. And the government has tried to balance the loss in revenue with fuel savings since then, but has had a tough time. The tax has increased, as shown in the table below.

EV PEAK POWER UP TO 50KW			~MAY 29, 2023		~MAY 29, 2024	
			%	on CIF	%	on CIF
Duty	on CIF	New category	10.0%	10.00	15.0%	15.00
Excise	on CIF+I/Duty		0.0%	-	5.0%	5.75
VAT	on CIF+I/D+Excise		13.0%	14.30	13.0%	15.70
Road Dev Tax	on CIF+I/D+Excise+VAT		5.0%	6.22	5.0%	6.82
Total	on CIF			30.52		43.27

EV PEAK POWER 51KW TO 100KW			~MAY 29, 2021		~MAY 29, 2022		~MAY 29, 2023		~MAY 29, 2024	
			%	on CIF	%	on CIF	%	on CIF	%	on CIF
Duty	on CIF	New Category	10.0%	10.00	10.0%	10.00	15.0%	15.00	20.0%	20.00
Excise	on CIF+I/Duty		0.0%	-	0.0%	-	10.0%	11.50	15.0%	18.00
VAT	on CIF+I/D+Excise		13.0%	14.30	13.0%	14.30	13.0%	16.45	13.0%	17.94
Road Dev Tax	on CIF+I/D+Excise+VAT		5.0%	6.22	5.0%	6.22	5.0%	7.15	5.0%	7.80
Total	on CIF			30.52		30.52		50.09		63.74

EV PEAK POWER 101KW - 200KW			~MAY 29, 2021		~MAY 29, 2022		~MAY 29, 2023		~MAY 29, 2024	
			%	on CIF	%	on CIF	%	on CIF	%	on CIF
Duty	on CIF	New Category	15.0%	15.00	30.0%	30.00	20.0%	20.00	30.0%	30.00
Excise	on CIF+I/Duty		0.0%	-	30.0%	39.00	20.0%	24.00	20.0%	26.00
VAT	on CIF+I/D+Excise		13.0%	14.95	13.0%	21.97	13.0%	18.72	13.0%	20.28
Road Dev Tax	on CIF+I/D+Excise+VAT		5.0%	6.50	5.0%	9.55	5.0%	8.14	5.0%	8.81
Total	on CIF			36.45		100.52		70.86		85.09

EV PEAK POWER 201KW - 300KW			~MAY 29, 2021		~MAY 29, 2022		~MAY 29, 2023		~MAY 29, 2024	
			%	on CIF	%	on CIF	%	on CIF	%	on CIF
Duty	on CIF	New Category	30.0%	30.00	45.0%	45.00	40.0%	40.00	60.0%	60.00
Excise	on CIF+I/Duty		0.0%	-	45.0%	65.25	45.0%	63.00	35.0%	56.00
VAT	on CIF+I/D+Excise		13.0%	16.90	13.0%	27.33	13.0%	26.39	13.0%	28.08
Road Dev Tax	on CIF+I/D+Excise+VAT		5.0%	7.35	5.0%	11.88	5.0%	11.47	5.0%	12.20
Total	on CIF			54.25		149.46		140.86		156.28

EV PEAK POWER ABOVE 301KW			~MAY 29, 2021		~MAY 29, 2022		~MAY 29, 2023	~MAY 29, 2024	
			%	on CIF	%	on CIF		%	on CIF
Duty	on CIF	New Category	40.0%	40.00	60.0%	60.00	Unchanged	80.0%	80.00
Excise	on CIF+I/Duty		0.0%	-	60.0%	96.00		50.0%	90.00
VAT	on CIF+I/D+Excise		13.0%	18.20	13.0%	33.28		13.0%	35.10
Road Dev Tax	on CIF+I/D+Excise+VAT		5.0%	7.91	5.0%	14.46		5.0%	15.26
Total	on CIF			66.11		203.74			220.36

Another massive change that has now taken place is that instead of taxing based on peak power, **the government has now changed the laws to tax electric vehicles based on import value.** Less expensive = Less tax and vice versa.

AUTOMOTIVE TAX STRUCTURE

TAXES & DUTIES

Fossil fuels are Nepal's largest import equating to an estimated 10% of GDP

Over 99% of electricity generation comes from hydropower

Nepal wants to be self sufficient and minimise fuel usage

Government Goal

80%

electrification by

2030

NEPAL GOVERNMENT REVISES TAX STRUCTURE IN NEW BUDGET (29 MAY, 2026)

Electric Vehicle Taxation	Duty	Excise	CIIF	VAT	Road Dev Tax
UPTO 200000 (CNY UPTO88861)	20%	0%	2.50%	13%	2.50%
2000000-3000000 (CNY 88861-133291)	20%	0%	20%	13%	5%
2000000-3000000 (CNY 88861-133291)	20%	0%	35%	13%	5%
4000000-5000000 (CNY 177679-222099)	20%	0%	90%	13%	5%
5000000 ABOVE (CNY 222099 AND ABOVE)	20%	0%	130%	13%	5%

Other Vehicle Taxation (CC)	Custom Duty	Excise Duty	CIIF	VAT	Road Development Tax
Hybrid (HEV+PHEV)	80%	60%	N/A	13%	10%
Upto 1,500cc	80%	65%	N/A	13%	10%
1,501-2,000cc	80%	75%	N/A	13%	10%
2,001-2,500cc	80%	85%	N/A	13%	10%
Above 2,500cc	80%	105%	N/A	13%	10%

Apart from tax structure, what are the other factors driving the shift to Electric cars?

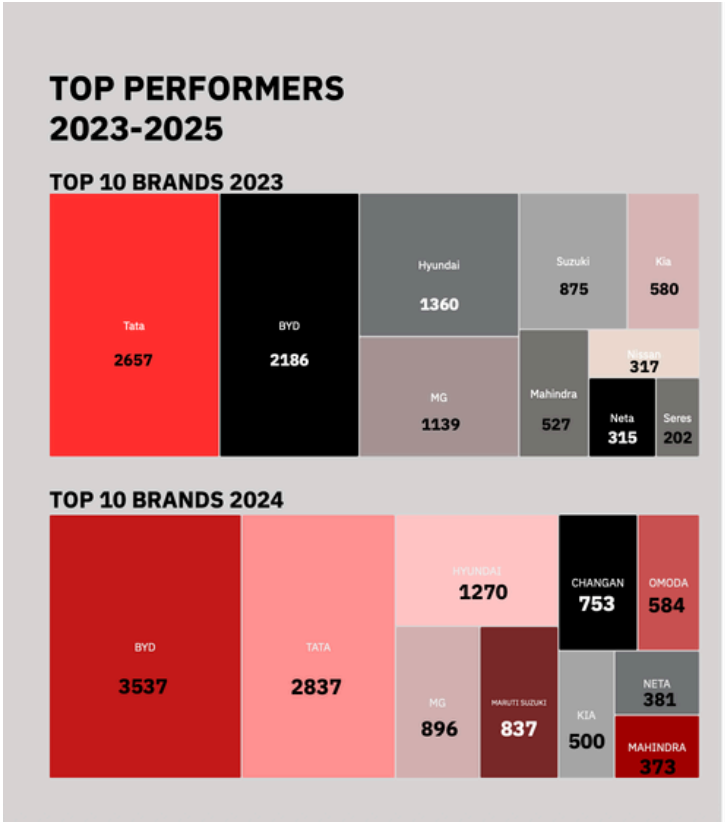
Nepal is a country with few sprawling cities that rarely require people to drive very long distances daily. Range anxiety is seen a bit differently here, as most people who do have the means to purchase 4 wheelers in general have homes where they can charge a vehicle on their premises for the very limited daily use. Another factor is that not many people live in apartments, where charging can be more challenging. A large proportion of Nepali car buyers still have access to private parking and home charging, which has made EV adoption easier.

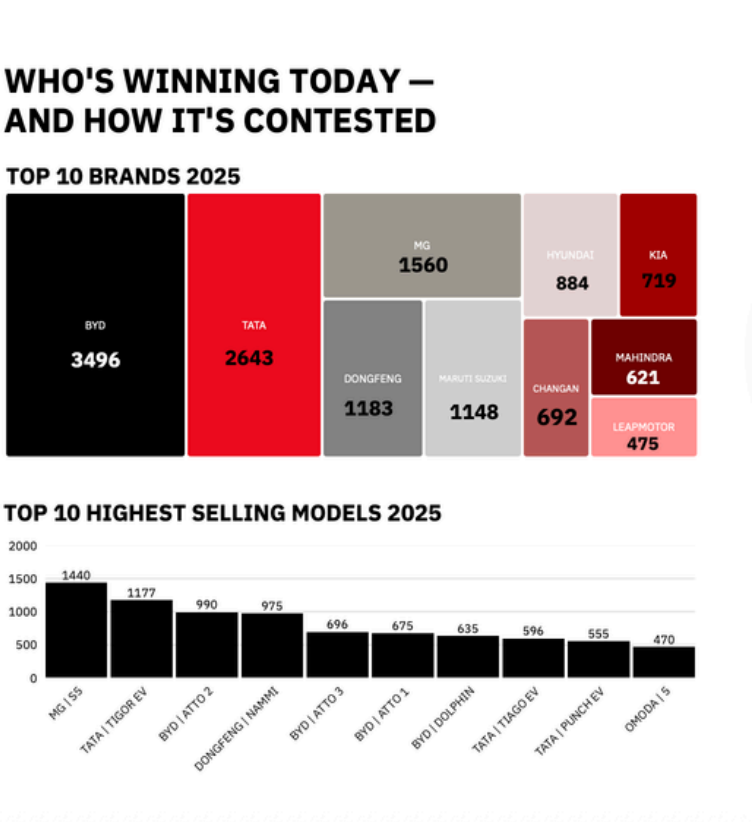
Finally, even the general cost of energy is quite low in Nepal: **the residential electricity price is NPR 5.790 per kWh, or USD 0.038**. **The electricity price for businesses is NPR 9.210 kWh or USD 0.061.** In general, this is very cheap compared to the rest of the world, making it very advantageous for reducing operational costs.

Is it correct to say that Chinese EV brands — led by BYD and Changan Auto — have largely displaced earlier incumbents in the four-wheeler space in recent years?

Chinese automotive brands have entered the Nepali market in successive waves, with new brands and models frequently capturing significant market attention and achieving strong sales volumes shortly after launch. In many cases, newly introduced models have sold hundreds, and sometimes thousands, of units within a relatively short period. **A key factor behind this success has been timing.** Chinese manufacturers entered the market at a point when few global automakers were offering electric vehicles with comparable levels of technology, features, and production scale—particularly at such competitive price points. Their ability to rapidly innovate, manufacture at scale, and bring products to market efficiently allowed them to establish a strong early-mover advantage.

The combination of favourable EV tax policies and the inherently competitive pricing of Chinese-made vehicles enabled these brands to offer exceptional value for money to consumers. As a result, many Chinese vehicles became highly attractive to the Nepali market, accelerating their adoption.





How are the traditional automotive brands responding to this shift?

Different manufacturers are taking different approaches. Some are accelerating BEV development, others are focusing on hybrids and multi-pathway strategies. From our experience, traditional brands are studying customer behaviour carefully and adapting their product plans to meet changing market needs. Working with legacy automotive brands, we as distributors have been explaining and studying together on how the next generation starts. We, as a company, are working to provide all kinds of information to companies so they can do what is necessary to deliver the best possible products to people.

Indian OEMs have long dominated Nepal's 2W automotive market. How is the EV transition rapidly redrawing market leadership?

Honda, Bajaj, TVS, and Hero have always been front-runners, and they still are, and I see some of them looking towards the next chapter of this industry. I do see innovation in 2W products led by Indian companies. So, I do not see the tide changing when it comes to India's dominance as a country of origin, but rather it will be the people who innovate for the subcontinent that will prevail in the long run. **BEV, as mentioned, still accounts for a small share of the two-wheelers sold in Nepal, but of the top 5, three are from India.** During the industry's evolution, I believe there is a greater opportunity for new entrants to find their place in the market.

Chinese EV brands are dominating the 4W space, and in two-wheelers, brands like Yadea are making inroads alongside Indian players like Ather, TVS, and Bajaj. Do you think India is at risk of losing Nepal's auto market?

In my view, when I look at the global landscape of the automotive industry, the **Chinese are ahead in 4W for next-generation products, but Indian products are in the lead in 2W**. Again, I think it comes down to the use case and the actual requirements of the general public in either country. India primarily moves on 2-wheelers, whereas China moves differently.

In my opinion, **Indian 4W companies would need to do something drastic in order to challenge the Chinese,** especially considering that China currently benefits from a highly integrated battery and EV supply chain, giving manufacturers advantages in scale, cost, and speed to market. When it comes to 2Ws, we see massive innovations coming aggressively from India.

The number of 2W EV importers in Nepal has shrunk from 86 to just 24 over about 3.5 years. What drove that consolidation, and is it a healthy sign for the market?

Many people would import these BEV vehicles consignment by consignment, with only a few shops, with the intention of achieving a quick turnaround and making some money. It was an easy sell, the early movers made a bit of money, and the rest saw it as an opportunity and got into the market. The problem here was that the product arriving was not receiving after-sales support.

Now, quite a few people understand this and are investing in the manpower, ecosystem, and general education for BEV 2Ws, which is creating a moat for businesses that actually have these facilities, making it harder for single consignment importers to do business the old way. I do believe that, with serious manufacturers trying to change the game in the two-wheeler industry and the right partners, it will raise riders' expectations and standards, too. We see higher numbers from brands that have actually invested in the entire ecosystem.

Ather leads the electric two-wheeler space in Nepal, with Yadea from China and, more recently, TVS and Bajaj entering the fray. How do you see the competition evolving?

With fuel prices rising, we see people looking towards BEVs now more than ever. It will be up to the distributor who works on building trust into the industry and the new technology that will finally win out, but right now I think any advancement in any EV brand is a win for the industry as a whole. I am looking forward to the competion where we are made to do better than one another in this industry and expand the piece of the electric pie.

You are also taking on the distribution of Ultraviolette in Nepal. Is there a market for performance-based premium electric motorcycles in Nepal today?

Nepal has a passionate motorcycling culture, and there is a growing segment of riders looking for premium performance products. While it will remain a niche category initially, I believe there is room for brands like Ultraviolette to create a strong enthusiast following.

Where do you see Nepal's EV penetration in both 2Ws and 4Ws five years from now?

I imagine that 4W BEV adoption will remain around 80-90%, but I don't see a complete takeover. At this point in Nepal's development, BEVs appear to be the most practical and economically attractive solution for a large share of personal mobility. But we still need fossil fuels, especially because we are still a global south country with infrastructure still in its early stages. Just an example: there are large infrastructure projects where BEV cars won't be best suited to reach remote locations with no energy infrastructure, let alone the lack of knowledge to repair these vehicles.

When it comes to 2Ws, I think there's a greater chance of change. In general, two-wheelers are used for shorter distances and are more likely to prioritise operational costs, for which EVs provide a huge advantage. I think the consolidation over the last couple of years, coupled with environmental factors such as people becoming comfortable with EV tech in Nepal due to 4W adoption, low energy costs, and high fuel costs, will lead to a ramp-up in 2W EV adoption.

BUILDING FOR TRUCKS: A GROUND-LEVEL VIEW OF ELECTRIC COMMERCIAL VEHICLE CHARGING IN INDIA

Hitender Vigamal, Head of Sales & Strategy, Planet3 Energy

Hitender is Head of Sales & Strategy at Planet3 Energy, with 17+ years of experience in industrial automation and electric mobility. A former leader at ABB India, he has been instrumental in building India's early EV charging infrastructure. He brings deep expertise in DC fast charging, CPO ecosystems, and fleet electrification. An EV user himself, he combines real-world experience with strategic industry insight.

***Planet3 Energies, the e-mobility venture of MAK Controls & Systems**, is a global engineering organisation, and DCPP partners with DRDO with over 50 years of legacy in aerospace ground support systems, precision power equipment, and mission-critical defence technologies. Built on this foundation, Planet3 is focused on delivering aviation-grade EV charging solutions where uptime, reliability, and lifecycle performance are non-negotiable.*

Infrastructure Planning for Electric Truck Charging

To set the context, electric trucks in India span a wide range—from small commercial vehicles with payloads of 1 to 1.5 tonnes, to 3.5-tonne and 5-tonne trucks, and up to 28-tonne, 50-tonne, and even 55-tonne heavy-duty trucks. The highest-capacity electric truck I have seen operating on Indian roads over the past year is around 55 tonnes. Overall, electrification across these segments is still relatively low, currently ranging **between 2.5% and 5%.**

Truck charging infrastructure is fundamentally different from passenger EV charging infrastructure and needs to be planned accordingly right from the beginning.

Layout

The charging site should be designed to accommodate three to four trucks simultaneously, with some vehicles charging while others wait for their turn. The canopies need to be significantly taller than those used for passenger car charging stations and should be designed to cover the front portion of the truck when it pulls up to the charger.

It is equally important to provide basic amenities for drivers. Since trucks may require one to two hours to charge, drivers need access to facilities where they can rest, eat, or sleep during the charging session.

Electrical Infrastructure

An HT electrical connection should be planned from day one. A typical highway truck charging hub would require approximately a **1,200 kVA transformer** with a sanctioned electrical load of around **1 to 1.5 MW, supporting approximately three 240 kW DC fast chargers on-site.**

Redundancy

Every truck charging hub should be designed with redundancy built into three critical areas.

- **Grid Failure** - Grid outages shouldn't be addressed through a diesel generator (DG) backup. The industry is gradually moving towards integrating Battery Energy Storage Systems (BESS) and solar energy, which will eventually reduce dependence on DG sets.
- **Network Failure -** If the Charging Station Management System (CSMS) does not support offline charging, any network outage can immediately make the charger unavailable. Therefore, every site should have two or three **independent redundant internet connections with auto switchover** to ensure uninterrupted operation.
- **Charger Equipment Failure** - Hardware or software failures can significantly impact fleet operations. To minimise downtime, operators should always maintain one spare high-power charger on-site. Considering that **240 kW has now become the standard charging rating for trucks and buses in India**, it is advisable to permanently keep one spare 240 kW charger available at every fleet charging location.

Interoperability

A truck charging station cannot be designed around a single OEM. Vehicles from manufacturers such as **Switch Mobility, Ashok Leyland, Volvo, Olectra, IPL Tech (Montra),** and others should all be able to charge reliably at the same location.

Interoperability testing, therefore, becomes a mandatory requirement and should be thoroughly validated before deployment.

How is the charging infrastructure for electric trucks evolving? Is it primarily captive, or are CPOs actively building infrastructure for multiple operators?

Most major Charge Point Operators (CPOs) initially focused on public charging infrastructure for passenger EVs and, in some cases, captive charging solutions for electric buses. However, combining passenger vehicle charging and heavy truck charging at the same location has proved to be challenging.

For truck charging specifically, **Yahhvi is a good example of a dedicated fleet charging CPO**. I have personally visited their hub in Manesar and a couple of locations in Bengaluru. Their infrastructure is designed almost exclusively for electric trucks, and their commitment to achieving near-100% uptime is clearly evident. In fleet operations, even a minute of charging delay can have a significant operational impact. Their charging hubs are also increasingly being integrated with Battery Energy Storage Systems (BESS) and solar energy.

On the OEM side, companies such as IPL Tech, EIM, and Ashok Leyland have established captive charging stations at strategic highway locations along their operating routes. **ChargeZone** has been doing commendable work in supporting **BillionE** electric truck operations.

Other CPOs—including **Zeon, AARGO EV Smart, JioBP, Tata Power, and Statiq**—also operate charging stations where trucks can be charged. However, for heavy-duty commercial vehicles, the most effective approach remains either a dedicated captive charging model or a specialised fleet charging network. A hybrid semi-public, semi-captive model is generally not sustainable for large commercial truck operations.

Dhabas have traditionally served as rest stops for truck drivers. Do you see them becoming natural locations for truck charging infrastructure?

Absolutely. Dhabas that primarily cater to truck drivers are among the most suitable locations for developing truck charging infrastructure.

If I am an electric truck OEM trying to convince a fleet owner to transition from diesel trucks—which often cost two to three times less than an electric truck—my first priority is to ensure reliable charging infrastructure along the exact routes where those trucks already operate.

These truck-centric dhabas naturally become the first locations to consider. **There are two practical approaches.**

- The first is to **lease adjacent land,** develop the required electrical infrastructure, and establish a properly designed multi-charger charging hub that operates as a captive or semi-public facility.
- The second approach is to **install DC fast chargers directly at the dhaba** to serve as an emergency top-up charging point.

This is particularly important because trucks carrying high-value cargo usually operate on fixed logistics routes, and drivers often have very limited flexibility to deviate from their assigned path.

Battery Swapping, Standardisation, Mining Applications & AutoCharge

Companies like EIM are pursuing battery swapping for trucks. Where does battery swapping make sense compared to fast charging?

Battery swapping for heavy-duty trucks is undoubtedly a promising concept. **EIM** has already moved ahead with this approach, **Blue Energy Motors** is actively working on it, and **IPL Tech** is also in the process of deploying its own battery-swapping infrastructure.

The typical battery-swapping configuration follows an **N+1 architecture**—such as 3+1, 5+1, or 7+1—where N fully charged battery packs are available while one empty slot receives the depleted battery from the incoming truck. The entire battery swap can be completed within **60 to 90 seconds using a robotic arm.**

The real challenge, however, lies in the economics.

A fully loaded **55-tonne electric truck** typically carries a battery pack ranging from **280 to 350 kWh.** A **6+1 battery-swapping station** designed for such trucks requires a megawatt-scale electrical connection, making the infrastructure investment extremely significant.

Based on my assessment, you would need at least **50 to 70 trucks operating regularly on the same route** before the economics of battery swapping become commercially viable.

Behind the scenes, the depleted battery packs are recharged via CCS2 connectors or the OEM's proprietary charging interface, depending on the system architecture. Most heavy-duty truck battery packs currently being imported into India already support dual charging arrangements to facilitate this flexibility.

For transporters operating relatively small fleets on fixed routes, however, a dedicated DC fast-charging station continues to make better financial sense. A larger population of electric trucks must first be deployed before battery-swapping infrastructure can become commercially sustainable. The encouraging trend is that electric truck sales are growing consistently month after month.

Can charging infrastructure be standardised across different commercial vehicle types, or does it need to be purpose-built for each application?

The first step towards standardisation is adopting a common charging standard. Most OEMs have now transitioned to CCS2. Manufacturers such as Tata Motors, Euler Motors, and Mahindra have already adopted CCS2 across their electric commercial vehicle portfolios.

However, having a common connector alone does not guarantee interoperability. Every truck OEM implements CCS2 communication slightly differently, which means interoperability testing remains essential.

Any CPO planning to deploy truck charging infrastructure should obtain a formal declaration from the charger manufacturer confirming that interoperability testing has been successfully completed with every major electric truck model available in India. If a charger fails to communicate with even one truck model at a live site, the consequences extend well beyond a single failed charging session. The CPO loses the transporter's confidence. The transporter loses the fleet owner's confidence. Eventually, the fleet owner may decide to return to diesel vehicles.

Charging Ratings

From what I currently observe in the Indian market, **120 kW** has become the preferred charging rating for **smaller commercial vehicles**, while **240 kW** is increasingly becoming the standard fo**r larger trucks and tippers.**

However, I would like to clarify an important technical misconception. Most chargers marketed as 240 kW DC fast chargers in India are equipped with 250 A charging cables. At the typical operating voltage of heavy-duty electric trucks—approximately 650 to 700 V—a 250 A cable connected through a single charging gun can practically deliver only about 120 to 130 kW. Therefore, describing such equipment as a true 240 kW single-gun charger is technically inaccurate. In reality, these systems function more like 2 × 120 kW chargers, each served by an individual charging gun.

A genuine 240 kW output from a single charging gun requires charging cables rated at approximately 380 A continuous current with 500 A peak capability. We demonstrated this during our deployment for Volvo Trucks India, where the vehicle successfully drew nearly 236 kW from a single charging gun.

How does charging infrastructure differ for off-road and mining applications?

Off-road and mining environments introduce an entirely different set of challenges. Several mining OEMs have informed us that many of their **mining sites lack a stable electrical grid.** In some locations, there is **no proper earthing system,** while in others, even a reliable neutral connection is unavailable. To address these challenges, we have been working with OEMs to configure chargers capable of operating without active earthing.

One such deployment by Planet3 Energy has now been operating successfully for over a month without active earthing. Although the charger has performed reliably, the quality and stability of the incoming electrical grid continue to remain the primary concern at such sites.

EV users often face the inconvenience of managing multiple CPO apps. Why do you think AutoCharge hasn't been widely implemented?

AutoCharge has been technically feasible for several years. The concept originated in Europe, and my own involvement with its implementation in India dates back to around 2021, when we worked with Zeon and MG Motor, followed later by Tata Motors.

The key enabler for AutoCharge is the unique Vehicle Identification Number (VID) assigned to every electric vehicle. Once manufacturers began shipping vehicles with unique VIDs, large-scale AutoCharge implementation became technically possible.

How does AutoCharge work? The user simply links the vehicle's unique ID with their registered mobile number and wallet within the CPO's mobile application. Whenever the charging connector is plugged into the vehicle, the charger automatically reads the vehicle ID, sends it to the CSMS, completes the authentication process, and starts charging automatically within a few seconds. No mobile application needs to be opened. No RFID card is required.

The Volvo Trucks deployment is a good example. **Over nearly 4 months, not a single charging session required manual driver intervention.** The driver simply plugged in the connector, and charging started automatically every time.

The reason AutoCharge has not yet become universally available is a combination of factors.

There is still limited awareness across the industry. Many new CPOs understandably prioritise expanding their charging networks and building brand visibility before investing in advanced software features such as AutoCharge.

There are also legitimate concerns around data privacy. CPOs should always obtain explicit user consent before linking a vehicle's identification number to a customer account. The larger challenge, however, is the fragmented charging ecosystem.

In my opinion, **India ultimately needs a single unified charging platform that not only displays charger locations but also provides real-time charger availability and recent charging history**, enabling users to assess charger reliability before arriving at a station.

Underperforming chargers should be clearly identified and, where necessary, removed from the unified platform until performance improves. A transparent scorecard that also reflects the performance of charger OEMs would also improve customer confidence and accelerate EV adoption.

CPOs can continue operating their own applications for payments, subscriptions, and loyalty programmes, but charger discovery, availability, and operational reliability should ultimately be accessible via a single common platform.

What are the fundamental reasons small CPOs fail, and what would be your suggestions for new entrants?

Having interacted with numerous Charge Point Operator (CPO) founders over the years, I've observed a few recurring patterns that explain why many smaller CPOs struggle.

Poor Location Selection - The biggest mistake is selecting the wrong location. Many new CPOs choose to install their first charging station at tourist destinations such as Agra, Varanasi, Ooty, or Tirupati. However, the revenue generated from tourist traffic is highly seasonal. In contrast, business corridors provide much more consistent utilisation throughout the year. If you are targeting tourist destinations or business hubs, I recommend installing chargers at 3-star and 4-star hotels, rather than focusing exclusively on 5-star properties.

Overly Scattered Deployment - With EV penetration in India still around 6%, spreading chargers across too many locations results in low utilisation and weak financials. The better approach would be to build dense charging corridors — covering origin, key stops, and destination along specific routes — rather than placing isolated chargers every 100 km.

Ignoring AC Charging - DC fast charging gets the attention, but AC charging remains critical at hotels, offices, and residential complexes where vehicles sit parked for hours. Many leading CPOs are now expanding into apartment societies, where residents can't get individual electrical connections — creating captive, recurring revenue opportunities.

My Advice for New CPOs - Onboard onto an established network first. It gives you instant visibility, user traffic, and revenue. Build your own branded app once you cross ~15 stations.

Choose the Right Charger Rating. Most modern passenger EVs already charge well above 60 kW. For public highway charging, the new baseline should be 120 kW.

Go Deep Regionally Before Going Wide Nationally. It's better to dominate one or two states than to spread thin across the country. In this business, local knowledge is a genuine competitive edge.

Pick One Segment and Execute It Well. Fleet, highway, residential, workplace, and truck charging are fundamentally different businesses — different economics, infrastructure, and customer expectations. Trying to serve all simultaneously leads to diluted execution. Pick one segment, scale responsibly, and expand only after building operational excellence.

FROM MOMENTUM TO MAINSTREAM: THE ELECRIC VEHICLE INFLECTION POINT IS NOW

The debates that once dominated Indian EV industry forums — will EVs work, will consumers adopt them, will the infrastructure keep up — have been replaced with a far more consequential set of questions: Can the ecosystem deliver reliably at scale? And is India ready to convert a geopolitical crisis into a structural energy transition? At Electricon 2026, EVreporter brought together six practitioners building this transition from the inside. Moderated by **Preetesh Singh**, the conversation moved across the full EV value chain.

What emerged was an industry taking honest stock of itself — acknowledging reliability gaps while quantifying progress, and recognising that the West Asia crisis has done in months what policy alone could not: made electrification a commercial imperative, not an environmental aspiration. Our key takeaways are presented in this write-up.

Reliability Is Not One Thing

The conversation opened with a challenge to one of the industry's most overused words. **Arth Patel of Tirex gently pushed back on how casually the term "reliability" gets thrown around.** For him, it operates at three distinct levels — the company, the product, and the service.

Charging infrastructure is a long-term commitment. The charger installed today is expected to last 10 to 12 years. Patel pointed to instances where companies entered the charging space and exited within a year, leaving their installed base without support. At the product level, reliability is how well a charger works. Are the internal components actually rated for the charger's stated output? Patel noted that this is a common gap. At the service level, reliability is measured by turnaround time and repair speed when issues arise. He also discussed a metric that is beginning to gain traction in the industry: **success rate — how many attempts does a user need before charging actually begins.**

Anshuman Divyanshu of Exicom stressed the importance of internal R&D competence and recognised that the ability to identify failures quickly and course-correct is what R&D investment ultimately buys. Companies that do not invest in R&D will find themselves unable to meet the demands of a market that is accelerating rapidly.

Who Is Responsible When A Charging Session Fails?

Kartikey Hariyani of ChargeZone was unequivocal - The CPO is responsible. The CPO's name is on the charger, and the customer's trust is placed there. He further added that ChargeZone call centre agents are trained to remotely take over and resolve issues in real time. And if it cannot be fixed, the team will guide the customer to a competitor's charger to ensure they get the charge.

Hariyani also rejected the idea that customers need to be educated about charging. The analogy he used was ICE: nobody needs to understand how a diesel engine works to refuel a car. The same standard should apply to EV charging. *The industry's job is to make the experience seamless — through innovations like auto-charge and plug-and-charge — not to train users to navigate its shortcomings.*

The Fleet Economics Conversation

The panel then shifted to the commercial vehicle segment, where the **economics of electrification are increasingly compelling — but where execution complexity is also highest.**

Sandeep Gambhir of Vertelo described their model that goes well beyond conventional financing. Vertelo engages fleet operators from the moment they begin considering electrification — helping them build the business case, identify the right asset, and structure their approach before an invoice even exists. Once funded, Vertelo manages the entire depot ecosystem: land, grid connectivity, energy supply, OEM servicing, battery replacement, and end-of-lease lifecycle. The operating lease model serves two purposes: it takes ownership risk off the operator's balance sheet, and it transfers the uncertainty of a still-maturing asset class to a party better equipped to manage it.

On TCO assumptions, Gambhir was candid about the limits of early projections. The most important variable is battery life, and real-world data is beginning to revise earlier assumptions. Fleets funded by Vertelo have logged 6 lakh kilometres over 3 years with batteries still at 91% state of health. Delaying battery replacement significantly improves operator IRR. Renewable energy integration can reduce energy costs by ₹2–3 per kilometre — far more impactful than negotiating marginal improvements elsewhere in the TCO. For large-format trucks running more than 300 kilometres a day, or buses running 500 kilometres a day, he said there is no reason not to go electric — it pays for itself.

Alpna Jain of Drivn framed the operator's perspective with equal clarity. The intercity bus market is still 85–90% diesel. An EV operator with operating costs of approximately ₹35 per kilometre has a cost advantage over diesel at around ₹50 per kilometre. A saving of ₹15 per kilometre across 2 lakh kilometres a year translates to **₹30 lakh in annual savings** — enough to recover the premium paid for the EV asset within roughly three years.

The diesel asset gets churned after five years. The EV asset, if battery life is well managed, can run productively for **10 to 12 years**. **Making that longer runway predictable** — through financing structures, AMC coverage, and battery replacement warranties — **is what determines the tenure of financing that can be obtained.** On large-format trucks running more than 7,000–8,000 kilometres a month, she said payback is 2.5 to 3 years, with contracts of 7 to 8 years viable at freight pricing equivalent to diesel. Kartikey Hariyani added that 6-year leases on large-format commercial vehicles are increasingly viable and attractive for both operators and their customers.

Two-Wheelers and the Standardisation Gap

Jyotiranjan Harichandan of Bolt.Earth brought the 2Ws and 3Ws segment into focus — the category with the highest EV penetration in India. The TCO case here was settled as far back as 2022. **What remains unresolved is access to fast charging away from home.**

Bolt.Earth has deployed 500–600 chargers, serving 80,000 to 1,00,000 unique users every month. Delivery and gig workers account for 25–30% of utilisation. **The majority, 60–70%, is coming from Tier 2 and 3 cities**, where daily commuters travel longer distances and need top-up charging away from home. Network density, he observed, directly correlates with utilisation: as more chargers go in, usage skyrockets.

The connector standardisation problem, however, remains unresolved for two and three-wheelers. The government has published standards but has not mandated them. He drew a parallel with USB-C: nobody today asks whether a phone needs an iPhone or Android charger, because the standard was mandated. **The same clarity is needed for 2W and 3W charging connectors**. Harichandan also noted that Bolt.Earth is working with additional OEMs to expand brand compatibility, with launches expected in the next two quarters.

The Recent West Asia Crisis That Changed the Conversation

The panel closed with a question about the West Asia oil crisis and what it means for EV adoption. The responses were unified.

Sandeep Gambhir: "*The future became the present. The war did what the government was trying to do for years*."

Kartikey Hariyani: "*The inflection point just went by in February–March. Electrification is an irreversible process now. It is no longer a choice*."

Alpna Jain: "*The motive to go electric is no longer sustainability — it is commercial. What a time to be part of this*."

Arth Patel: "*Energy independence has become a massive focus for every country. The future is not coming — it is already here.*"

Anshuman Divyanshu offered a measured note. The opportunity is real, he said, but it also places responsibility on every stakeholder to deliver on their promises in a fair and transparent manner. Short-term gains pursued by any part of the ecosystem could discourage adoption just as it reaches its most critical stage.

Harichandan ended with a personal story. His father, in Bhubaneswar, waited six hours in a petrol queue and came away with only ₹1,500 worth of fuel. That evening, he called his son and asked him to find nearby locations for placing EV chargers. "*I always thought Odisha would be late to the EV party," Harichandan said. "I think that has changed*."

Next Generation BESS Technologies using 392Ah/587Ah/684Ah LFP Cells

Rahul Bollini, Bollini Energy

Rahul is a seasoned technical expert in Lithium-ion cells, EV batteries and BESS, with over 11 years of experience in manufacturing facility setup, process development, and project execution. Based in Bangalore and Shenzhen, he provides technical leadership and end-to-end project support to companies across global markets. He can be reached at +91-7204957389; bollinienergy@gmail.com.

This article discusses the upcoming trends in the BESS industry – 392Ah/587Ah/684Ah cells assembled into 6.25MWh/6.9MWh BESS containerized systems.

Why are BESS capacities getting bigger?

- Larger cells have lower costs, higher cycle life and higher efficiency.
- Larger systems have reduced assembly costs.
- Larger systems have lower balance-of-system costs.
- Larger systems have lower maintenance and lower failures.
- Larger systems utilise less land and fewer project-level balance of systems.

Three new generation cells and two new generation BESS technologies:

- **392Ah LFP prismatic cells** are being adopted by companies that do not want to invest in new manufacturing lines and want to use the existing lines that produce 314Ah cells. The dimensions are very similar to 314Ah cells. While the 314Ah cell dimensions are around 72*174*207mm, the 392Ah cell dimensions are estimated to be 75*182*225mm (according to a manufacturer that launched a 392Ah cell).

8 cluster container of a 6.25MWh BESS using 587Ah cells

- **587Ah/588Ah LFP prismatic cells are being planned in new manufacturing lines,** and they can be either produced in a winding and lamination (Z stacking) process. These cells are undergoing final validation in pilot projects and will enter mass production soon. They are suited for **0.5C (2-hour) projects.** They increase the existing 5MWh container capacity to 6.25MWh with 587Ah cells and to 6.26MWh with 588Ah cells. It utilises similar 104S1P packs like the ones in 5MWh, but they have 8 clusters instead of 12 clusters in the 5MWh BESS.

The 6.25MWh BESS requires the newly launched 3.15MW-rated PCS. This PCS configuration is just entering the market and is still undergoing certifications.

The 6.25MWh BESS uses a very modular approach to capacity sizing. It can be used in multiples of 4 nos. for every 25MWh project. For example, a 100MWh project would use 16 such containers instead of 20 5MWh BESS containers.

Similarly, 600Ah+ cells, such as 684Ah and other larger LFP prismatic cells, are not suitable for production on existing manufacturing lines and require new lines; they can only be produced via the lamination (Z stacking) process due to their larger size. Larger-sized cells are difficult to produce in the winding method.

The larger the cells become, the lower the manufacturing and raw material costs, but they have poor thermal management, so the C rate of use becomes a constraint. These cells are being introduced for 0.25C (4-hour) projects. They are not yet ready to be used for 0.5C projects, and it will take a while.

684Ah cell produced using lamination process.

The use of 6.9MWh BESS is well-suited to work with existing 1.725MW PCS for 0.25C projects and can also be compatible with 2 nos. of 1.725MW PCS for 0.5C projects. 1.725MW PCS is an older design that has been in production for a while; it was launched to suit a 3.44MWh BESS (older than the 5MWh BESS design). 6.9MWh BESS can also replace the old projects that utilise 3.44MWh BESS and are due for capacity augmentation.

Additionally, some companies have launched 700Ah+, 800Ah+, 1000Ah+ and 2000Ah+ cells. They are all going into mass production soon. They are targeted to achieve 7MWh+ and 8MWh+ systems and higher capacities.

The race for larger cells will continue, and there is no limit to how big they can get. But this comes at a cost and requires constant investments for cell manufacturing companies and BESS assembly companies.

POLICY & REGULATION

DELHI

Delhi EV Policy 2026 has been notified, applicable from 1 July 2026 to 31 March 2030. The Government will invest ₹7,000 crore, while Delhiites are expected to receive nearly ₹15,000 crore in benefits.

- **Electric-only registration** for autos and N1 carriers from Jan 2027, and 2Ws from Apr 2028.
- 100% road tax and registration fee exemption on electric cars priced up to ₹30 lakh
- Purchase incentives: E-2Ws up to ₹30K; E-3Ws up to ₹50K; e-N1 goods vehicles up to ₹1 lakh
- Scrapping incentives of ₹5,000–₹1 lakh for replacing older vehicles

Government of India
Ministry of Road Transport and Highways

MoRTH signs MoUs with **Tata Motors, Ashok Leyland and Switch Mobility for the Delhi-NCR old truck/bus replacement scheme.**

- 8% discount on ex-showroom price of eligible trucks and buses; for EVs, the discount is capped at the level applicable to an equivalent ICE vehicle in the same GVW category.
- Central Govt will provide 5% interest subvention and fixed monthly fuel vouchers for 5 years. Participating State Governments to offer up to 100% motor vehicle tax concession for ten years and registration fee waivers for eligible beneficiaries.

INVESTMENT ANNOUNCEMENTS

JBM ECOLIFE Mobility, a subsidiary of JBM Auto, has raised **₹750 crore** from MO Alternates to support the deployment of 2,000 electric buses across India. JBM plans to grow its operational fleet from 3,400 to 5,000 buses over the next 12 months.

Electric Truck company **Energy In Motion (EIM) secures an INR 300 crore investment.** Ravindra Energy Limited (REL) has invested INR 150 Crores, and the other shareholders of EIM have invested an equal amount. Incorporated on March 19, 2024, EIM is an associate venture of Ravindra Energy Limited (49.5% shareholding). Post allotment, EIM will continue to be an associate entity of the REL with a 49.54% stake.

BatX Energies raises ₹105 Crore in a Series A round led by IvyCap Ventures, with participation from existing investors Zephyr Peacock India, Mankind Pharma Family Office, Excel Industries Family Office and JITO. BatX currently has a capacity of 5000 MTA for battery shredding and 5000 MTA for hydrometallurgy. The company has a network of micro facilities spread across India of 20,000+ MTA to obtain the input for battery shredding and a battery refurbishing capacity of 20 MWh.

JSW Green Mobility invests in Lithium Urban Technologies, an enterprise mobility platform. Backed by Eversource Capital, Lithium Urban manages over 25,000 trips daily through over 3,000 vehicles and 1,300 chargers, serving over 100 enterprise customers.

Gurugram-based EV mobility platform **Trevel has raised $1 million** in a funding round co-led by India Accelerator and Finvolve. The funds will be used for fleet expansion, technology development, marketing, and operational strengthening.

BikeWo Green Tech Limited has signed an MoU to acquire a 51% stake in PositiEV Mobility. The transaction aims to combine both companies' operations in EV retail, leasing, financing, charging infrastructure, battery swapping, fleet management, and after-sales services to build an integrated EV mobility platform in India. After completion, **Hiten Pal Saklani** is expected to become CEO of BikeWo.

INVESTMENT ANNOUNCEMENTS

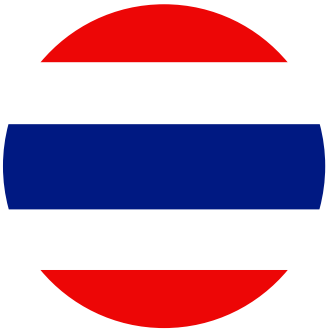
Used two-wheeler platform Speedioo has raised ₹10 crore in a seed funding round led by Atomic Capital. The funds will be used to develop its AI-enabled technology platform, expand distribution, strengthen OEM partnerships, and scale its dealer and retail network. Speedioo plans to expand into 3–4 cities through a franchise-led model.

Black Mass Energies has raised $114,000 in an FDI-backed pre-seed funding round led by a US-based angel investor. The Bengaluru-based battery recycling and critical minerals recovery company said the funding will be used for black mass refining R&D focused on LFP batteries, development of battery recycling technology, and expansion of sales operations and customer acquisition.

Hyderabad-based electric mobility company **ElectriQ has closed its early seed funding round,** with participation from Earlyseed Ventures, Eisen Enterprises, angel investors, and HNIs. The company said this is its first external funding round and that it has remained profitable since inception.

African e-mobility company **SPIRO has closed its funding round at $270 million, following a $55 million investment from NewTrails Capital**. Equitane, Impact Fund Denmark and Newtrails Capital are included in the $270M raise. The funding will support the expansion of its battery-swapping network, industrial footprint and EV infrastructure across its African markets.

The **Thailand Board of Investment** announced that the country has secured investment commitments totalling approximately **USD 4.1 billion across 198 EV value chain projects.**



- BEVs: USD 1.18 billion across 18 projects with a planned annual production capacity of over 370,000 units.
- HEVs and PHEVs: USD 1.18 billion across 14 projects.
- Batteries and ESS: USD 1 billion across 57 projects.
- EV components: USD 373 million across 49 projects.
- Charging infrastructure: USD 292 million across 42 projects, supporting more than 22,900 charging stations, including over 10,000 DC fast chargers.

Investment & Funding Roundup

COMPANY	AMOUNT RAISED	ROUND / TYPE	KEY INVESTORS	DETAILS
JBM ECOLIFE Mobility	**₹750 crore**	Investment	MO Alternates	To support deployment of 2,000 e-buses; JBM aims to grow its operational fleet from 3,400 to 5,000 buses in 12 months
Energy In Motion (EIM)	**INR 300 crore**	Investment	Ravindra Energy Limited (REL) — ₹150 cr; other shareholders — ₹150 cr	REL holds 49.5% shareholding; post-allotment, EIM becomes an associate entity of REL with 49.54% stake
BatX Energies	**₹105 crore**	Series A	IvyCap Ventures (lead); Zephyr Peacock India, Mankind Pharma Family Office, Excel Industries Family Office, JITO	Capacity: 5,000 MTA battery shredding, 5,000 MTA hydrometallurgy; 20,000+ MTA collection network; 20 MWh refurbishing capacity
Lithium Urban Technologies	*Not disclosed*	Strategic Investment	JSW Green Mobility (investor); backed by Eversource Capital	Manages 25,000+ daily trips across 3,000+ vehicles and 1,300 chargers; 100+ enterprise customers
Trevel	**$1 million**	Funding Round	India Accelerator, Finvolve (co-lead)	Gurugram-based EV mobility platform; funds for fleet expansion, technology development, marketing, operational strengthening
BikeWo Green Tech / PositivEV Mobility	*Not disclosed* (51% stake)	M&A (MoU)	BikeWo Green Tech Limited	Combines retail, leasing, financing, charging infra, battery swapping, fleet management; Hiten Pal Saklani expected to become CEO of BikeWo
Speedioo	**₹10 crore**	Seed	Atomic Capital (lead)	Used two-wheeler platform; funds for AI-enabled tech, distribution, OEM partnerships, dealer/retail network; expansion to 3–4 cities via franchise model
Black Mass Energies	**$114,000**	Pre-seed (FDI-backed)	US-based angel investor	Bengaluru-based battery recycling & critical minerals recovery; funds for black mass refining R&D (LFP focus), recycling tech, customer acquisition
ElectriQ	*Not disclosed*	Early Seed	Earlyseed Ventures, Eisen Enterprises, angel investors, HNIs	Hyderabad-based e-mobility company; first external funding round; profitable since inception
SPIRO	**$270 million**	Funding Round	NewTrails Capital ($55M), Equitane, Impact Fund Denmark	African e-mobility/battery-swapping company; funds for battery-swapping network, industrial footprint, EV infrastructure expansion across African markets

Source: Company announcements & press releases

evreporter.com

NEW LAUNCHES

Tata launches the Sierra electric SUV at an introductory starting price of ₹18.79 Lakh. Deliveries start from 15 Jul 26.

- 510–530 km range
- 75 kWh battery
- 0–100 kmph in 5.8 sec
- Fast charging: 263 km in 15 min
- 504 Nm Torque
- 306 PS Power
- Dual-Motor QWD
- V2L and V2V capability

Mercedes-Benz India launches the S 450 e, its first **PHEV S-Class,** priced from ₹2.20 crore (Launch Edition). It pairs a 3.0L turbo-petrol engine with a 120 kW motor (combined 320 kW/680 Nm), a 22 kWh battery, ~115 km WLTP electric range, and a 0–100 km/h time of 5.7 seconds.

Ampere launches the Reo VYB low-speed electric scooter at ₹69,499, with a 25 km/h top speed, claimed 80 km range, LFP battery, 24-litre storage, and keyless start — available in four colours.

Revolt Motors launches RVX electric bike at an introductory price of ₹1.24 lakh (after applicable PM E-DRIVE incentives). Following the implementation of the new Delhi EV Policy, customers in Delhi will be able to own it at an ex-showroom price of ₹94,990, the company said.

- 160 km IDC range
- 3.24 kWh removable NMC battery
- 4 kW Mid-Drive PMSM motor | 5.3 kW peak power
- 0 to 40 kmph in 3.9 seconds
- Top speed - 90 kmph

Keeway India launches its e-scooter, the Keeway Hypevolt-R, at an introductory price of INR 1,99,000 (Ex-showroom).

- 5 kWh NMC | Dual battery architecture
- Parallel removable battery packs
- IDC-certified range - 180 km
- 0–80% charging in ~3 hours
- Mid-mounted PMSM | 12 kW peak power | Rated power - 6 kW
- 0–40 km/h in 2.3 seconds
- Top speed of 115 km/h

BUSES, COMMERCIAL VEHICLES & FLEET ELECTRIFICATION

UP government flagged off 45 Switch Mobility e-buses to serve the upcoming Noida International Airport; CM Yogi Adityanath also inaugurated the Noida e-bus depot for charging, maintenance, and fleet operations.

Meghalaya launched its first 5 electric buses under the PM eBus Sewa Scheme, part of a sanctioned fleet of 50 buses. Buses offer a claimed 180–200 km range, seat 25 plus driver, and include GPS, e-ticketing, and wheelchair access.

Rajasthan flagged off EKA Mobility e-buses in Jaipur, marking phase one of an 876-bus order with operator Chartered Speed across eight cities, awarded under the PM e-Bus Sewa initiative.

Tata Motors secures orders for 3,400+ electric commercial vehicles spanning small commercial vehicles/pick-ups (~2,000), trucks (~900), and buses (~500), for use across e-commerce, logistics, FMCG/FMCD distribution, mining, steel, cement, airport, and passenger applications.

UltraTech Cement deploys 45 electric heavy-duty trucks (55-tonne) with **Energy In Motion** for clinker transport from Rajasthan to the Delhi-NCR region, covering a lead distance of roughly 250 km.

Hindustan Zinc deploys a 250-tonne hybrid electric crane (Sany India) at its Debari smelter in Rajasthan. The diesel-electric crane is expected to avoid ~250.8 tCO_2e annually versus its diesel predecessor.

vedanta transforming for good | HINDUSTAN ZINC Zinc & Silver of India

Delhivery and **Bajaj Auto** partner to deploy **200 Bajaj RIKI e-carts** for last-mile delivery, including Tier-2/3 cities, with a second phase (~1,500 units) planned for 2026–27. The RIKI C4005 offers a claimed range of 100+ km.

Green Drive Mobility and **Furlenco** expand their EV logistics partnership from Bengaluru into Delhi and Hyderabad, targeting a **phased shift of ~150 ICE vehicles to EVs.**

CHARGING INFRASTRUCTURE

Exicom enters the European charging market with its Spin Air home EV charger, featuring app-based controls, dynamic load management, and an all-weather design — building on its supply ties with 13+ global OEMs.

Bolt.Earth and ChargeZone partner to enable users to locate, access, and pay for chargers across both networks through a single application. The integrated network covers over 1,500 fast-charging locations for 4Ws.

Bolt.Earth partners with MapmyIndia to make its 4W EV charging network discoverable through MapmyIndia navigation platforms. MapmyIndia currently enables the discovery of 18,000 EV chargers across India through integrations with multiple charging partners.

BATTERY, MATERIALS & MANUFACTURING

Ola Cell Technologies (OCT) gets BIS certification for its 46100 LFP cylindrical cell under IS 16046 (Part 2):2018/IEC 62133-2:2017 — a first for an Indian company. The cell also meets IS 16893 (Parts 2 & 3) and UN 38.3 standards. OCT is developing both NMC and LFP cell technologies.

Mecwin Technologies India and **Fraunhofer IWKS** have signed an MoU for technical collaboration on the manufacturing and development of **sintered neodymium-iron-boron (NdFeB) permanent magnets.** Mecwin plans to establish a manufacturing facility in India for sintered NdFeB magnets serving electric mobility, industrial motors, defence, aerospace, and RE sectors.

N.A.N. GreenMet and **Silox** form a 50:50 JV (NAN Silox GreenMet) for lithium-ion battery recycling and critical minerals recovery. The facility in Andhra Pradesh will target 40,000 MTPA of shredding capacity and 20,000 MTPA of hydrometallurgical processing capacity across two phases, producing battery-grade metal salts (Li, Co, Ni, Mn), pCAM, and CAM (Cathode Active Material).

Lineage Power to procure **3 GWh of LFP cells** (314Ah prismatic) from **China's Rongjie Energy (RJE Tech)** for its BESS manufacturing platform. RJE Tech is a leading Chinese manufacturer of lithium-ion battery cells.

EMO Energy enters the heavy commercial vehicle segment with an 800V-capable battery platform (LFP and NMC compatible) for buses, trucks, freight, and construction/industrial vehicles, integrating battery, charging, thermal management, and monitoring.

EMO Energy has also partnered with Revamp Moto to deploy 5,000 low-speed e-scooters for last-mile delivery, starting with 1,000 units. The scooters use EMO's 2 kWh ZenPac battery (90 km range, ~20-minute fast charge).

Dhoot Transmission ties up with Ride Vision (Israel) to develop ADAS and intelligent mobility/safety technologies localized for Indian roads.

NEW EV FINANCING PARTNERSHIPS

VinFast India signs MoUs with Tata Capital and Shriram Finance for dealer/inventory financing and customer vehicle financing respectively, including up to 100% on-road funding options for buyers.

Switch Mobility signs MoUs with **Shriram Green Finance** (retail financing) and **Punjab National Bank** (retail/channel financing) to expand customer and dealer financing options.

Switch Mobility has signed a memorandum of understanding (MoU) with Drivn to strengthen EV leasing solutions for its customers.

Drivn, an EV leasing platform for heavy commercial fleets, has partnered with **BillionE Mobility** to lease and deploy 200 electric trucks. In the first phase, 22 electric trucks will be deployed for a cement industry customer.

Muthoot Capital signs a Preferred Financer Agreement with **Greaves Electric Mobility** to support retail financing for latter's electric 2Ws.

Matter Motor Works partners with Shriram Finance as retail financier for its AERA electric motorcycle, targeting wider access in Tier-2/3 markets.

Hyderabad-based e-2W OEM **Quantum Energy partners with Hero FinCorp**, an NBFC, to make electric scooters more affordable through flexible financing options

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