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EV Monthly updates

NOV 2025

Published on 5th Dec 2025

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🚨 INDUSTRY/ POLICY UPDATE 🚨

PLI SCHEME FOR RARE EARTH MAGNETS

OVERVIEW

The Government of India **introduced a ₹7,280 crore Production-Linked Incentive (PLI)** Scheme to promote domestic manufacturing of rare earth permanent magnets (REPM), a critical component for electric vehicles, renewable energy systems, and electronics. The scheme will promote **domestic manufacturing of 6,000 MTPA of sintered REPM**.

BACKGROUND

India is working to secure a stable supply of Rare Earth Permanent Magnets (REPMs) amid tightening export restrictions from China, which currently dominates the global supply chain. With **India's REPM demand projected to double by 2030,** driven by electric vehicles, renewable energy, industrial machinery, and consumer electronics, dependence on imports poses a strategic risk.

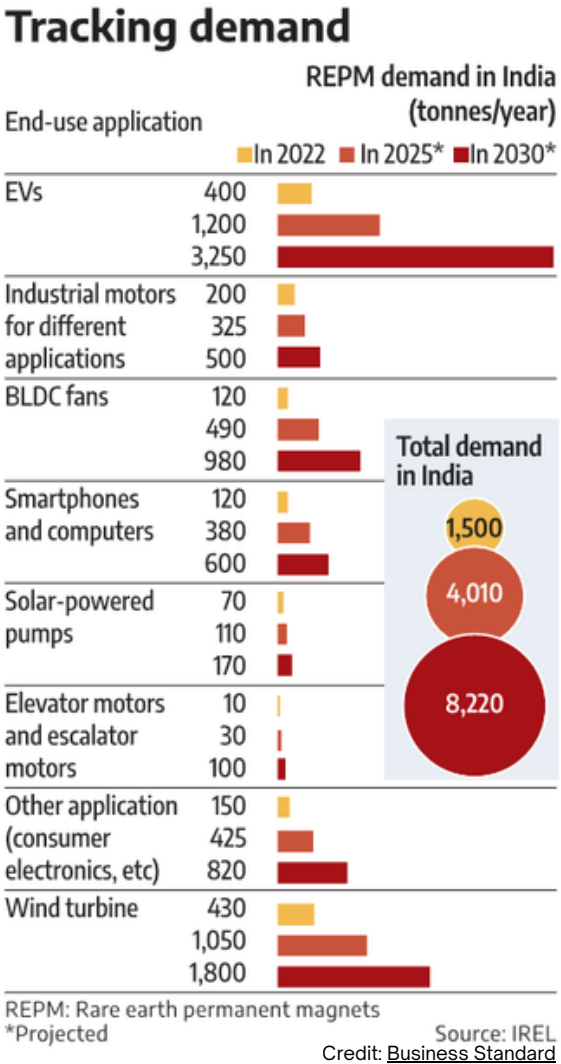
The Department of Science and Technology has developed indigenous REPM technology, while the government is negotiating raw material tie-ups with **suppliers in South America, Africa, the UK, and Australia to ensure steady access to rare earth oxides.** Approximately one tonne of rare earth oxide produces three tonnes of permanent magnets, making these partnerships crucial for building a secure and self-reliant magnet manufacturing ecosystem.

KEY FEATURES

- Total Outlay: **₹7,280 crore**
- Duration: **7 years**
- Objective: Incentivize domestic production of rare earth permanent magnets
- Planned Capacity: **6,000 tonnes per annum** across five manufacturing units
- Focus Area:
  - Later stages of the manufacturing chain — converting **neodymium-praseodymium (NdPr) oxide into sintered neodymium-iron-boron (NdFeB) magnets**
  - Encouraging technology development and value addition within India
- Sustainability Focus:
  - Proposed inclusion of spent magnet recycling to ensure circular resource management

EXPECTED IMPACT

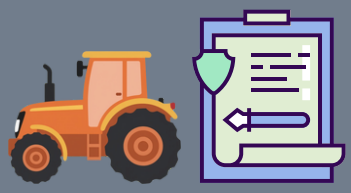
- Strengthen India's self-reliance in critical materials for EVs, wind turbines, and electronics
- Reduce import dependency on China
- Boost domestic innovation and high-value manufacturing in the strategic materials sector



Credit: Business Standard

🚨 INDUSTRY/ POLICY UPDATE 🚨

TREM-V EMISSION NORMS FOR 25–50 HP TRACTOR



🔍 BACKGROUND & POLICY UPDATE

India's Ministry of Road Transport and Highways has finalized the Bharat Stage TREM V emission regulations for agricultural and construction equipment, aligning closely with EU Stage V standards. These norms introduce stringent limits on PM, PN (new), NOx, HC, and CO, extending India's first unified emission framework for agricultural and construction machinery.

TREM-V norms are scheduled to take **effect from April 2026** and, unlike TREM-IV (which applied only to >50 HP tractors), will cover all tractor horsepower categories, including 25–50 HP, which dominate India's farm landscape.

TRACTOR OEMS URGE GOVERNMENT TO POSTPONE TILL 2028

THE PROPOSAL AIMS TO EASE THE BURDEN ON SMALL AND MID-RANGE TRACTOR MAKERS IN INDIA

Technology Requirements & Industry Impact

- Under TREM-IV, >50 HP tractors adopted CRDi fuel injection and advanced emission controls. **TREM-V now brings similar requirements to smaller tractors and adds the need for diesel particulate filters (DPFs)**—significantly raising engine complexity, redesign costs, and after-treatment expenses.
- For the **widely used small-HP tractors, this may increase purchase prices,** maintenance complexity, and cost of ownership, impacting affordability for India's small and marginal farmers. Manufacturers warn that immediate TREM-V compliance will be challenging due to cost pressure, supply-chain readiness, and technology integration timelines.

Industry Pushback: Call for Phased Introduction

- **Tractor manufacturers (TMA) and industry bodies have requested the government to defer TREM-V implementation for 25–50 HP tractors to 2028**, citing high production costs, technical hurdles, and limited preparedness. They argue that rapid adoption could disrupt the market, reduce demand, and burden small farmers who rely heavily on budget-friendly tractors. The sector supports cleaner emissions but seeks a phased transition to balance environmental goals with farmer affordability and industry stability.

Policy Process Ahead

- **The government is currently reviewing industry submissions,** balancing environmental imperatives with economic realities of India's fragmented farm sector. A final notification or modification to timelines will determine whether TREM-V proceeds as scheduled in April 2026 or is pushed to a later phase. The decision will shape technology upgrades, price structures, and the competitive landscape of India's farm machinery market over the next decade.

🚨 INDUSTRY/ POLICY UPDATE 🚨

PM E-DRIVE SCHEME STATUS – (2024–2028)

OVERVIEW

The Government of India launched the PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM e-DRIVE) scheme on 29 September 2024 to accelerate green mobility and strengthen India's EV ecosystem. The s**cheme has a total outlay of ₹10,900 crore for the period 1 April 2024 – 31 March 2026,** with the earlier Electric Mobility Promotion Scheme (EMPS 2024) now fully subsumed within it.

While the scheme continues for all segments, the government has **extended it until 31 March 2028 specifically for e-ambulances and select categories**, whereas e-2W and e-3W incentives end on 31 March 2026. As of **23 November 2025, ₹1,634.62 crore in subsidies has already been disbursed.**

PM-EDRIVE SCHEME STATUS

Segment Name	Vehicle Category	Target Sales	Total Sales*
e-2W	L1+L2	24,79,120	17,78,671
e-3W	e-rickshaw & e-cart	39,034	5,144
e-3W	L5	2,88,809	2,75,547
e-buses	e-buses	14,028	0
e-trucks	e-trucks	5,643	0
Testing Agencies upgradation	-		
Admin expenses	-		
TOTAL	**28,26,634**		**20,59,362**

**As per vahan as of 04-12-2025 (PM-EDRIVE dashboard). The details given are for digitized vehicle records as per centralized Vahan 4. Data some RTO's of Lakshadweep has not been provided as they are not in centralized Vahan 4.*

SCHEME PROGRESS

1.Charging Infrastructure Progress

Charging Infrastructure:

Under the PM E-DRIVE scheme, there is an allocation of Rs.2,000 crore for setting up of electric vehicles' public charging infrastructure (EVPCI). As on 23/11/2025 no grants have been disbursed for installation of EVPCI. Two Oil Marketing Companies have shown interest and submitted proposals for installation of EVPCI under the PM E-DRIVE Scheme.

2. e-ambulances:

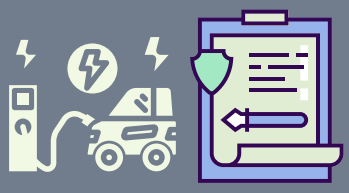
Stakeholder consultations for 500 crore allocation of e-ambulances under the PM E-DRIVE Scheme has been completed and guidelines are likely to be notified soon.

3. e-Buses:

Under the PM E-DRIVE Scheme, 1,500 e-buses have been allocated to Mumbai and 2,800 e-buses have been allocated to Delhi. Other than Mumbai, 1,000 e-buses have been allocated to Pune, in Maharashtra.

🚨 INDUSTRY/ POLICY UPDATE 🚨

TN MANDATES EV CHARGING IN NEW BUILDINGS (2025)



The Government of **Tamil Nadu has amended the Tamil Nadu** Combined **Development and Building Rules, 2019 (TNCDBR) via G.O. Ms. No. 171 dated 30-Oct-2025**, making EV-charging infrastructure mandatory for most new residential, commercial, industrial and institutional buildings. The objective is to integrate EV- readiness into urban built-environment at planning/design stage, enabling smooth transition to electric mobility as EV adoption ramps up.

🏠 KEY HIGHLIGHTS FEATURES

Where it applies

- New residential, commercial, industrial, and institutional buildings.
- Not applicable to small residential buildings:
- ≤ 14m height, ≤ 8 units, < 750 m².

Residential Buildings

- Every car parking slot must be EV-ready.
- Every two-wheeler parking must also be EV-ready.
- Projects with 50+ units: Visitor parking must include fast chargers.

Commercial / Other Buildings

- 10% of parking spaces must be EV-designated.
- These must include fast-charging points.

✅ WHAT DEVELOPERS / BUYERS / STAKEHOLDERS SHOULD KNOW

Stakeholder	Key Requirements / Impact
Developers & Architects	Must integrate EV wiring, electrical load, and charging points in building plans; EV-ready parking is mandatory.
Homebuyers / Residents	New apartments will come EV-ready, with charging points per parking slot — a key amenity as EV sales rise. In larger complexes, visitor bays will even get fast-chargers.
Commercial / Office Owners	At least 10% of parking spaces must be EV-designated with fast-charging points, making workplaces, malls, offices EV-friendly by design.
Township / Urban Planners	Must plan EV infrastructure early: load capacity, cable routing, safety, and scalable upgrades.
Investors / EV Infra Providers	Increased demand for chargers, wiring, load-management systems, and installation services across new developments.

🚨 INDUSTRY/ POLICY UPDATE 🚨

DRAFT CAFE III NORMS SPARK INDUSTRY DEBATE (2027–2032)

🔍 OVERVIEW

The Bureau of Energy Efficiency (BEE) has released draft CAFE III (Corporate Average Fuel Efficiency) norms for passenger vehicles, applicable from 2027–28 to 2031–32. These norms set fleet-average CO_2 and fuel-efficiency targets for automakers, shifting fully to the WLTP test cycle.

📉 KEY FEATURES OF DRAFT CAFE III

- **Fleet-level compliance:** No targets for individual models; OEMs are measured on sales-weighted average emissions.
- **Technology-neutral:** Does not favour EVs, hybrids, CNG, or any specific technology.
- **Progressive tightening:** Fleet fuel consumption target to drop from **3.73 → 3.1 L/100 km.**
- CO_2 goal: Reduce emissions to **< 91.7 g/km under WLTP.**

Special Small-Car Concession (Controversial Clause)

Eligible small cars **(≤ 909 kg, ≤ 1,200 cc, ≤ 4 m length)** get:

- 3 g/km CO_2 reduction credit (for fleet-average calculation)
- Max 9 g/km per model per reporting period
- Intended to support low-cost, mass-market vehicles

INDUSTRY DEBATE ON CAFE NORMS

- **FOR:**

Defend the 3 g/km Co2 benefit for cars under 909 kg

- **AGAINST:**

Criticised weight-based emission norms

🚗 AUTOMAKER OPPOSITION

India's major automakers have strongly opposed the proposed weight-based CO_2 relief for small cars under CAFE III, arguing it unfairly benefits a single dominant small-car manufacturer and undermines the technology-neutral intent of the norms. OEMs say the concession disadvantages companies pushing larger, safer, or EV-focused portfolios while diluting India's long-term electrification goals. Tata Motors, despite commanding 85% of the small-car segment, has rejected the exemption, noting that no sub-909 kg cars currently meet Bharat NCAP safety standards and that there is no valid basis for category-specific relaxations.

🏛️ POLICY PROCESS AHEAD

Finalising CAFE III norms will require coordinated agreement between the Ministry of Road Transport & Highways, Ministry of Heavy Industries, and the Ministry of Power (BEE). The draft is expected to undergo extensive dialogue and revisions as the government balances industry concerns, safety standards, and India's broader emissions and EV-transition objectives.

EV MARKET UPDATES

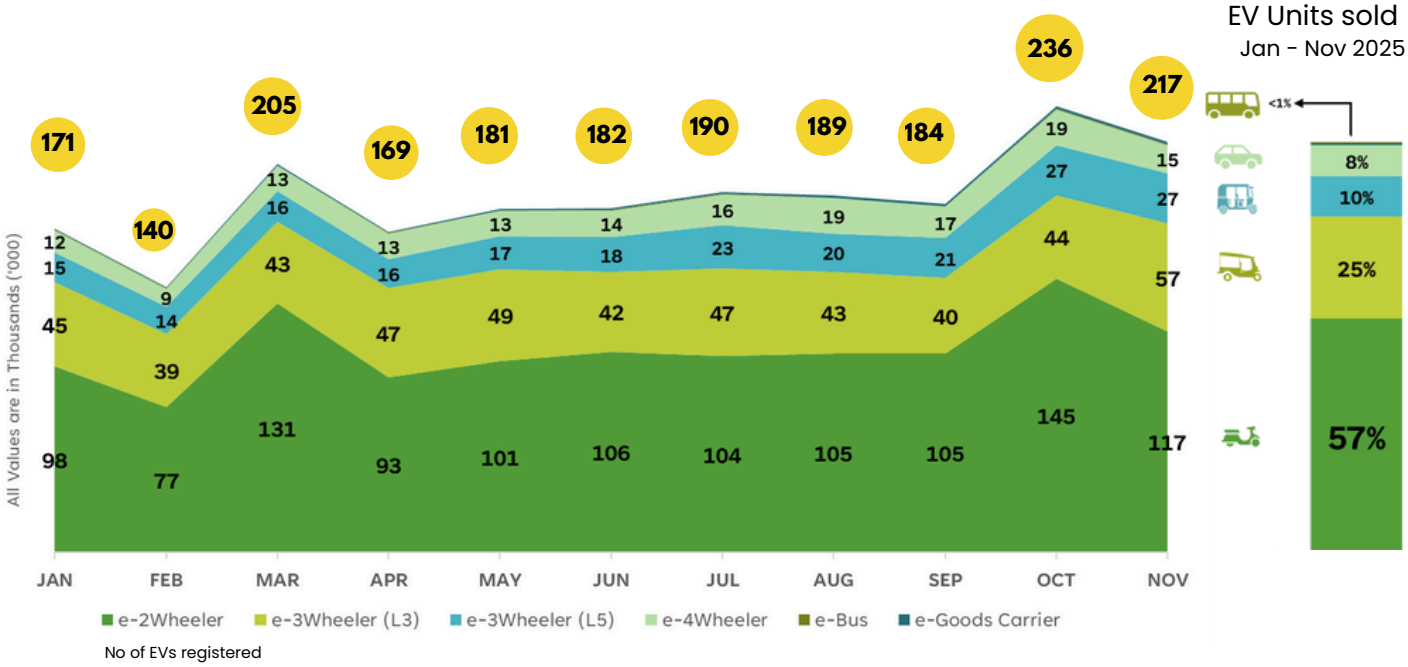
INDIA SALES SNAPSHOT, NOV 2025

Vehicles registered in India (All segments)

- **3.3 million vehicles** were sold in November, inspite of expectation of sharp dip in sales post-October. Resilient demand in November and festive carry-over momentum helped sustain market momentum.
- There was marginal **2% overall market growth** as compared to November last year even though some part of festival period was in November last year
- India's electric vehicle market has surpassed **2.1 million registrations in 2025**, exceeding total number of electric vehicles sold in 2024 and it is likely that total electric vehicle sales for 2025 will be around 2.3 million

India EV sales Trend 2025 (Jan - Nov)

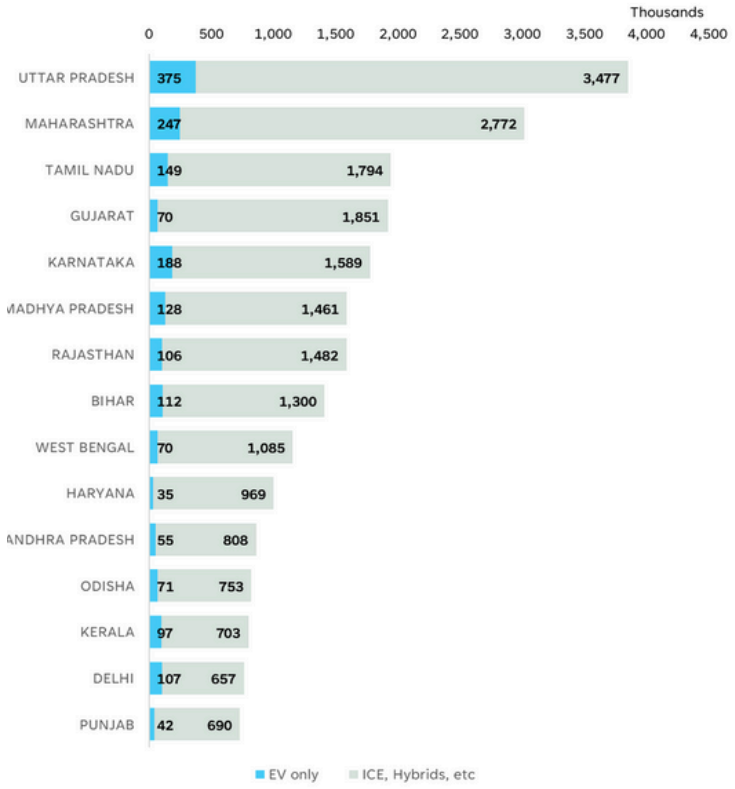
2.1 million
EV Units sold
Jan - Nov 2025



Source: Vahan Portal, IESA Analysis

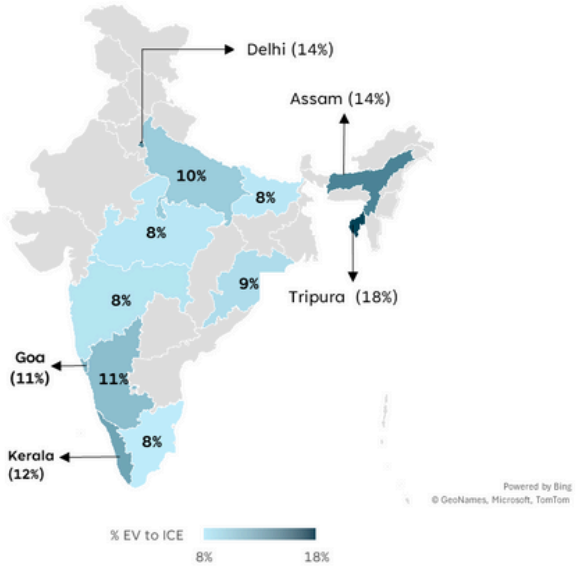
STATE WISE VEHICLE SALES, NOV 2025

Top 15 States in Vehicle sales, 2025 (Jan - Nov)

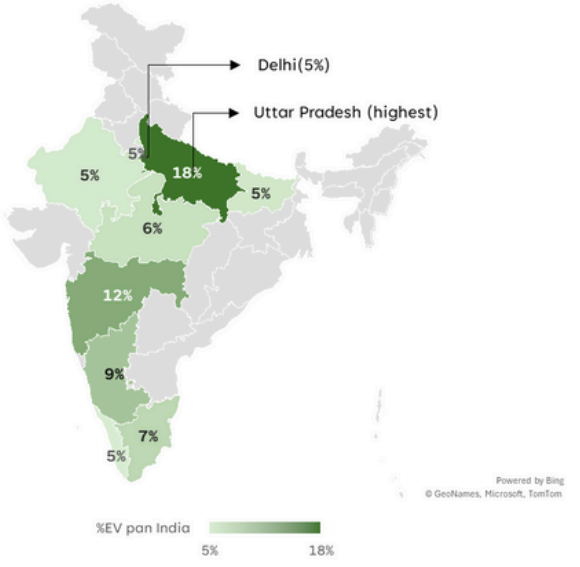


% EV to ICE	%EV Pan India	EVs + ICE + Hybrids (thousands)
10%	18%	3852K
8%	12%	3019K
8%	7%	1943K
4%	3%	1921K
11%	9%	1777K
8%	6%	1589K
7%	5%	1588K
8%	5%	1412K
6%	3%	1155K
3%	2%	1003K
6%	3%	863K
9%	3%	823K
12%	5%	801K
14%	5%	764K
6%	2%	731K

Top States with highest EV to ICE ratio, 2025 (Jan - Nov)



Top States with %EV penetration Pan India, 2025 (Jan - Nov)



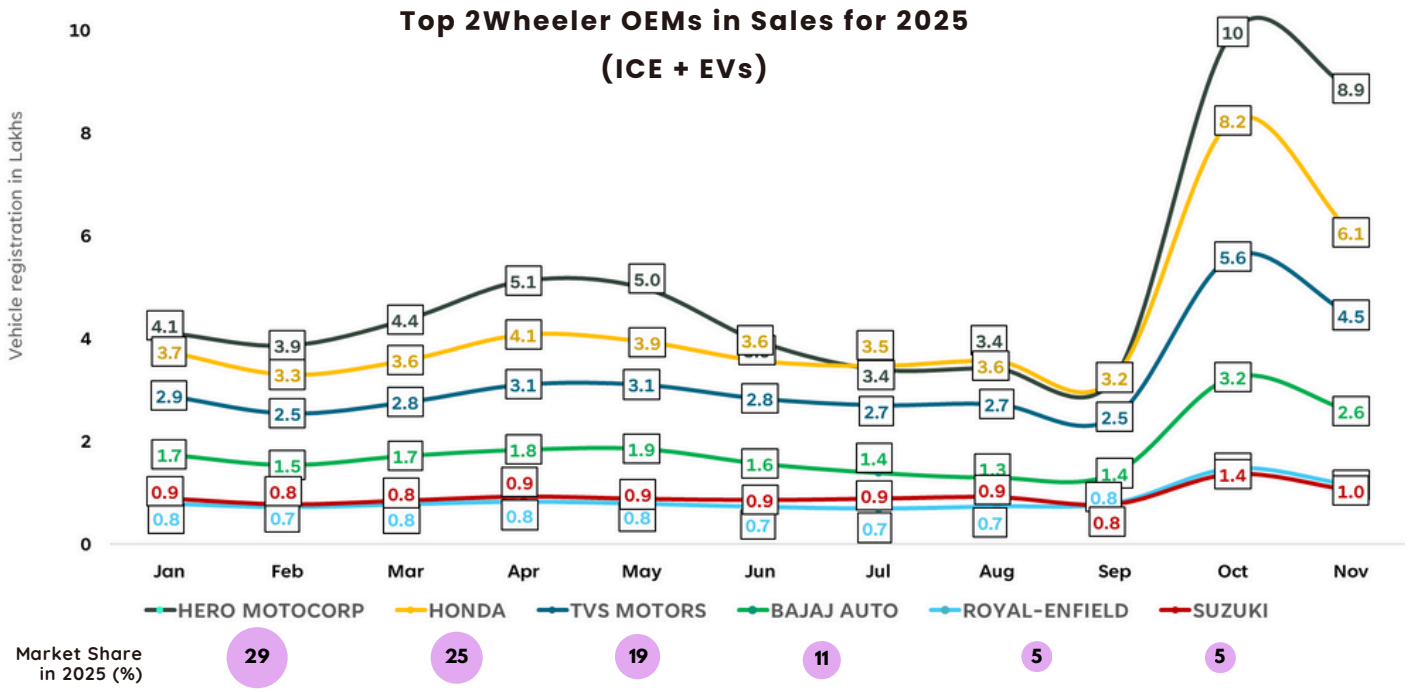
- Overall **EV penetration for November 2025 was 7%**
- **Four of the top fifteen** EV-selling states recorded **higher EV penetration (>10%)** compared to the national average, with Delhi leading at 14%, Kerala at 12%, Karnataka at 11%, and Uttar Pradesh at 10%. Notably, the eastern states—**Tripura (18%) and Assam (14%)** recorded the **highest EV-to-ICE ratio in 2025**.
- Over **50% of total EV sales came from six states,** with UP (18%) and Maharashtra (12%), followed by Karnataka at 9%, Tamil Nadu at 8%, and Kerala, Rajasthan, Delhi, Bihar contributing 5% each.

Source: Vahan Portal, IESA Analysis

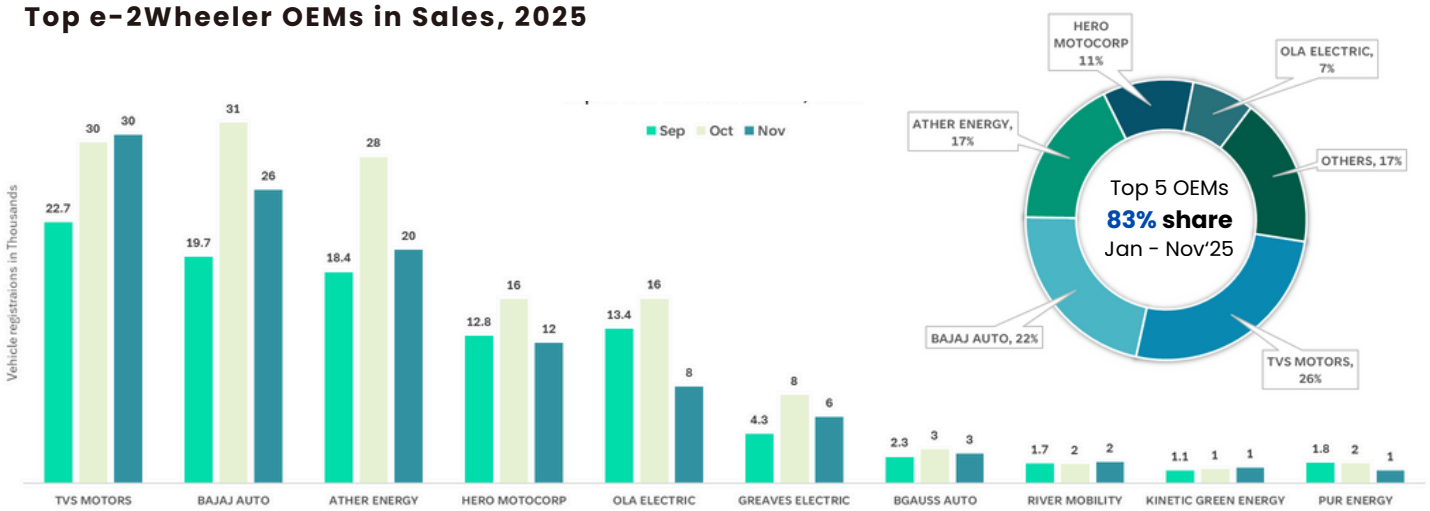
Telangana data not available in Vahan

OEM WISE: JAN - NOV 2025

2Wheelers



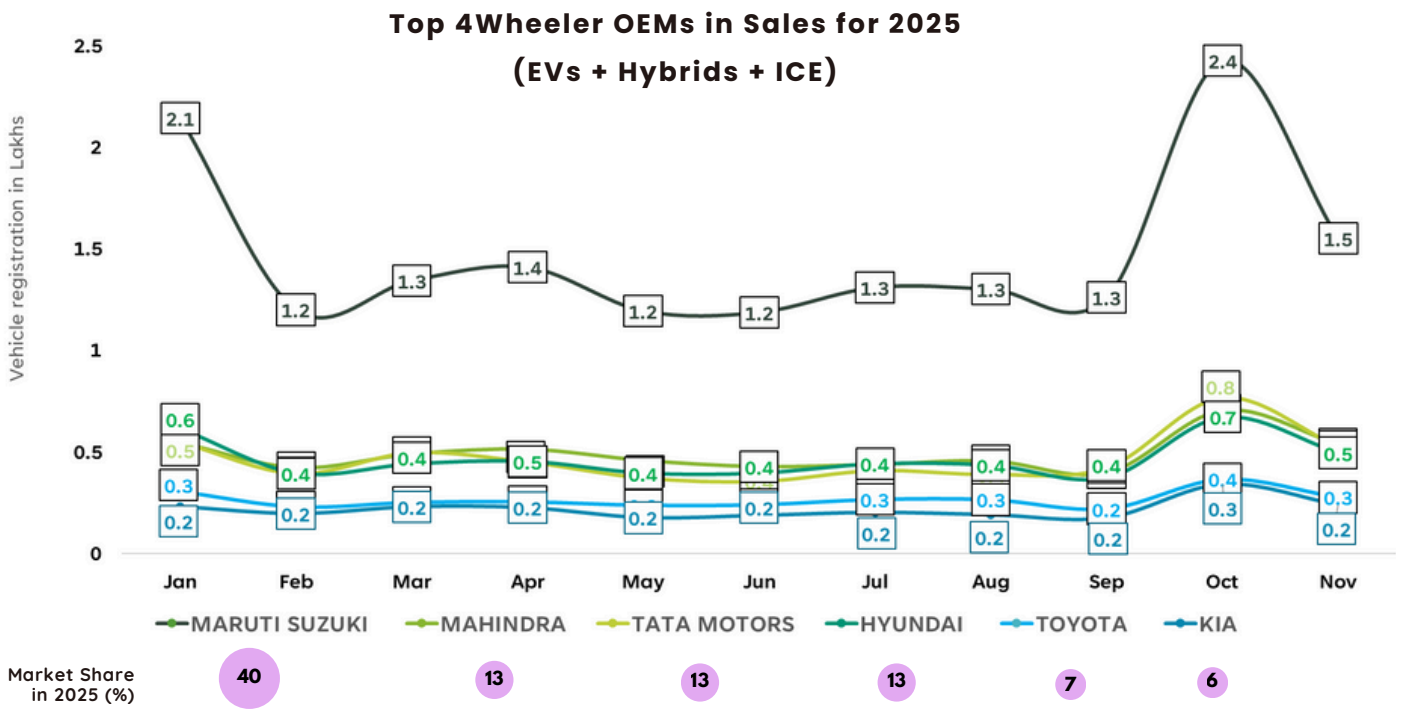
- On overall basis, **Hero Moto Corp continues to lead the market** with 8.9 Lakh units sold followed by Honda and TVS
- In terms of EV market, **overall EV penetration was 4.6%** with top **five OEMs commanding 84%of sales**, indicating clear market consolidation.
- **TVS leads the EV market with 26% share,** followed by Bajaj Auto (22%) and Ather (17%) in November'2025. On YTD basis, TVS leads with 23% share closely followed by Bajaj Auto (21%) and Ather - Ola sharing third place with 16% share, however continued decline in Ola sales is impacting its market share.



Source: Vahan Portal, IESA Analysis

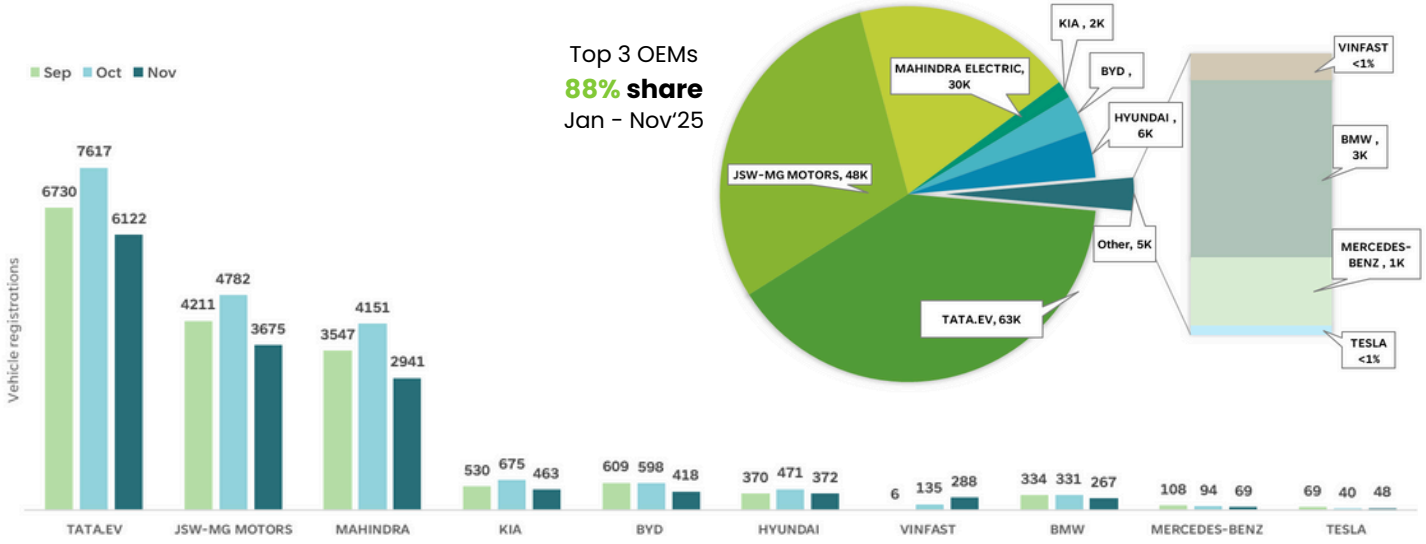
OEM WISE: JAN - NOV 2025

4Wheelers



- Overall **EV penetration in November was 3.8%.** Tata Motors continues to lead EV sales, with EVs accounting for nearly **11.6% of its total sales.**
- JSW MG Motor ranks second with **3,675 EV units, contributing over 84% of its total sales,** highlighting its strong focus on electric cars. **Mahindra holds the third position,** driven by robust sales of the XUV9e and BE6e models and recently launched and aggressively priced XEV 9S.
- BYD has entered the Top 5 list supported by competitive pricing and network expansion. Cumulative EV sales for **BYD has crossed over 10,000 units.**

Top e-4Wheeler OEMs in Sales, 2025



Source: Vahan Portal, IESA Analysis

OEM WISE: JAN - NOV 2025

e-3Wheelers, L3

- **YC Electric is a clear leader in the low speed e rickshaw (L3) segment** supported by good sales network, competitive pricing and good product reliability
- Interestingly, overall sales of **L3 segment increased** from monthly average of **44K units to 57K units** in November'2025. While sales of Top 3 (YC Electric, Dilli Electric and Saera Auto) were steady, increase in overall sales was on account of good sales by other makes like Mini Metro, Hooghly Motors, Terra Motors, etc.

Rank	Top e-3Wheeler (L3) OEM-Nov 2025	2025 (11 Months)											Jan-Nov Volume	%Share
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
1	YC ELECTRIC	3.9K	3.4K	3.4K	3.4K	3.7K	3.3K	3.6K	3.4K	3.2K	3.4K	3.4K	38.0K	8%
2	DILLI ELECTRIC	1.8K	1.6K	1.6K	1.7K	1.7K	1.6K	1.8K	1.7K	1.4K	1.7K	1.9K	18.5K	4%
3	SAERA ELECTRIC	2.3K	2.1K	2.2K	1.8K	2.0K	2.0K	2.2K	2.1K	1.4K	2.0K	1.9K	21.8K	4%
4	ZENIAK INNOVATION	0.8K	0.7K	0.8K	0.7K	0.8K	0.7K	0.9K	0.8K	0.8K	0.6K	1.7K	9.3K	2%
5	MINI METRO	1.0K	0.9K	1.0K	1.0K	1.2K	1.0K	1.1K	1.1K	1.0K	1.1K	1.4K	11.8K	2%
6	HOOGHLY MOTORS	0.4K	0.3K	0.3K	0.4K	0.4K	0.4K	0.5K	0.5K	0.4K	0.4K	1.3K	5.3K	1%
7	FEDE INDUSTRIES	0.2K	0.2K	0.2K	0.2K	0.2K	0.2K	0.3K	0.3K	0.4K	0.3K	1.3K	3.9K	1%
8	TERRA MOTORS	0.6K	0.6K	0.7K	0.6K	0.9K	0.8K	1.0K	0.8K	0.7K	0.8K	1.3K	8.8K	2%
9	J. S. AUTO	0.9K	0.8K	1.0K	1.2K	1.0K	0.8K	0.9K	0.9K	0.8K	1.0K	1.3K	10.6K	2%
10	ENERGY ELECTRIC	1.0K	0.9K	1.1K	1.2K	1.1K	1.0K	1.2K	1.1K	0.9K	1.1K	1.3K	11.8K	2%
	TOTAL ALL OEMs	45K	39K	43K	47K	49K	42K	47K	43K	40K	44K	57K	495K	100%

Top 10 OEMs **28% share** Jan - Nov'25

e-3Wheelers, L5

- **High-speed e3Ws** have the highest **EV penetration at 35%** across all Fuels, with traditional OEMs continuing to dominate the space. Startups, however, are gradually gaining traction.
- Organised players from L5 segment are starting to focus on the L3 segment. Mahindra Last Mile already has 3 models in the L3 segment (e-Alfa Mini, e-Alpha Super and e-Alpha Plus), Omega Seiki has the Ride and **Bajaj Auto** has recently **entered the e rickshaw segment with launch of Bajaj Rikki**.

Rank	Top e-3Wheeler (L5) OEM-Nov 2025	2025 (11 Months)											Jan-Nov Volume	%Share
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
1	MAHINDRA LAST MILE	5,455	5,323	6,031	5,086	6,016	6,777	9,062	7,740	7,742	10,854	9,845	79.9K	37%
2	BAJAJ AUTO	5,357	4,588	5,293	5,509	6,292	6,478	7,626	6,253	6,799	7,960	8,692	70.8K	33%
3	TVS MOTORS	133	309	737	1,207	1,583	1,654	2,208	2,214	2,337	2,863	2,871	18.1K	8%
4	PIAGGIO VEHICLES	1,586	1,171	1,389	1,141	1,037	1,033	1,193	1,199	1,042	1,404	1,314	13.5K	6%
5	TI CLEAN MOBILITY	560	532	538	502	498	486	593	582	525	615	639	6.1K	3%
6	ATUL AUTO	261	269	325	229	215	179	183	275	227	410	591	3.2K	1%
7	OMEGA SEIKI	608	1,106	517	471	453	459	471	404	484	469	503	5.9K	3%
8	SAERA ELECTRIC	2	11	9	3	11	23	52	104	178	297	411	1.1K	1%
9	EULER MOTORS	316	241	395	353	350	254	354	295	296	371	369	3.6K	2%
10	ATUL GREENTECH	152	146	221	131	128	69	75	178	113	185	208	1.6K	1%
	TOTAL ALL OEMs	15K	14K	16K	16K	17K	18K	23K	20K	21K	27K	27K	214K	100%

Top 10 OEMs **93% share** Jan - Nov'25

Source: Vahan Portal, IESA Analysis

OEM WISE: JAN - NOV 2025

e-Buses

- EV penetration of e-bus segment is **5%** and the **top 6 OEMs account for 91%** of the market share. Upcoming **tender from CESL for 10,900 e-buses** under PM-EDRIVE scheme will boost the adoption for e-buses in states and cities
- **PMI electro Mobility, Olectra Greentech, and Switch Mobility** with consistent monthly growth trends, with market shares **above 20% each**.
- Several **new entrants have entered the market,** with limited sales

Rank	Top e-Bus OEM-Nov 2025	2025 (11 Months)											Jan-Nov Volume	%Share
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
1	PINNACLE MOBILITY	1	2	1	3	12	108	24	12	6	5	126	300	8%
2	OLECTRA GREENTECH	59	66	76	25	60	80	89	99	143	106	90	893	23%
3	PMI ELECTRO MOBILITY	68	57	25	188	147	57	49	58	85	107	73	914	24%
4	SWITCH MOBILITY	125	88	113	0	51	126	20	97	70	29	54	773	20%
5	JBM ELECTRIC	48	36	4	46	65	123	148	72	21	35	20	618	16%
6	AZAD INDIA	0	0	0	0	0	0	5	4	4	8	6	27	1%
7	AEROEAGLE	23	12	28	0	0	0	0	3	0	0	0	66	2%
8	MYTRAH MOBILITY	0	0	0	1	0	1	0	0	0	0	0	2	0%
9	TATA MOTORS	23	42	24	6	3	34	21	49	11	0	0	213	6%
10	VE COMMERCIAL	0	0	0	12	0	0	7	0	6	0	0	25	1%
	TOTAL ALL OEMs	372	307	280	284	338	529	363	394	346	290	369	3,872	100%

Top 6 OEMs **91% share** Jan - Nov'25

e-Goods Carrier

- e-Goods Carrier **EV penetration is 2%** and the two traditional OEMs, Tata Motors and Mahindra Last Mile, **together accounted for 66% of the market share.**
- Strong presence observed from Switch Mobility and Euler Motors in the electric CV segment.
- VE Commercial and Jupiter are newer entrants, with VE Commercial showing growth momentum following the launch of its Volvo Eicher Pro X range earlier this year, marking its entry into the EV LCV segment.

Rank	Top e-Goods Carrier OEM-Nov 2025	2025 (11 Months)											Jan-Nov Volume	%Share
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
1	TATA MOTORS	315	255	304	259	222	275	311	391	594	599	488	4,013	42%
1	MAHINDRA LAST MILE	132	116	173	168	192	171	294	254	275	307	273	2,355	24%
2	EULER MOTORS	16	17	30	38	33	38	66	79	55	151	253	776	8%
3	SWITCH MOBILITY	43	37	45	35	74	33	75	176	90	123	70	801	8%
4	TIVOLT ELECTRIC	6	5	2	9	13	5	17	26	33	46	66	228	2%
5	VE COMMERCIAL	0	4	4	27	67	56	51	79	68	61	45	462	5%
6	PROPEL INDUSTRIES	0	6	23	0	1	1	0	0	2	4	27	64	1%
7	ENERGY IN MOTION	0	0	0	0	0	0	0	0	13	61	21	95	1%
8	SANY HEAVY	0	0	0	0	0	0	0	1	2	0	14	17	0%
9	IPL TECH ELECTRIC	6	0	11	7	14	8	11	40	6	17	11	131	1%
	TOTAL ALL OEMs	566	489	681	604	669	619	878	1,144	1,206	1,470	1,299	9,625	100%

Top 6 OEMs **90% share** Jan - Nov'25

Source: Vahan Portal, IESA Analysis

IESA
India Energy Storage Alliance

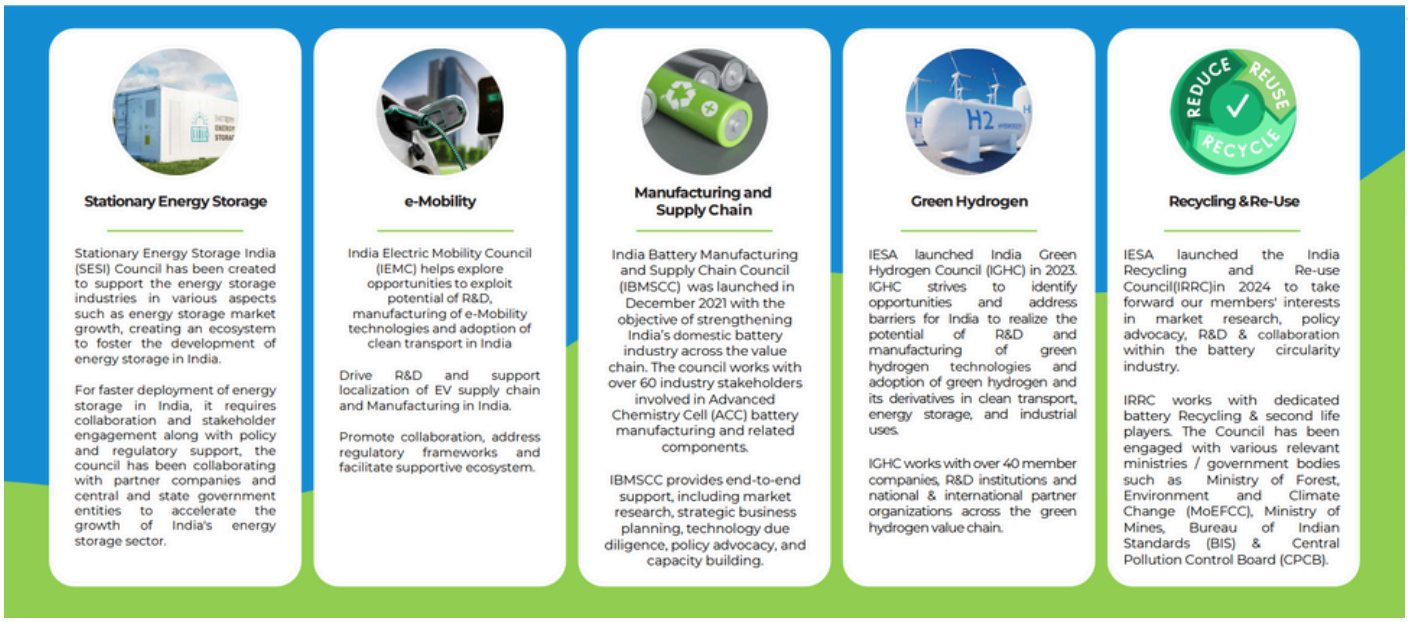
India Energy Storage Alliance (IESA)

IESA is a leading industry alliance in India with 180+ member companies across energy storage, electric mobility, and green hydrogen industries. IESA members include companies across the value chain in these industries, from material producers to component and supply chain companies, to Original Equipment Manufacturers (OEMs) and project developers. IESA members include public sector undertakings, large conglomerates, R&D institutions, small-, & medium-scale enterprises (SMEs), and startups.

IESA was founded and is operated by Customized Energy Solutions India Pvt. Ltd. (CES India) since 2012. For over twelve years, IESA has been at the forefront of building from ground up the energy storage industry in India.

IESA organizes its efforts across five Working Groups, each focusing on one vertical – Stationary Energy Storage, Electric Mobility, Green Hydrogen, Battery Manufacturing & Supply Chain, Recycling & Reuse

Our Verticals



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Membership benefits

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