

INDIAN ELECTRIC VEHICLE INDUSTRY

Over 150 GWh of li-ion battery cell
capacity committed to be
operational by 2030

MARCH 2025





[Click to see full report](#)

Multiple challenges exist on the road to establishing a cell manufacturing ecosystem, primary ones being technology complexity, high capital intensity and raw material availability

There is no significant development of battery recycling infrastructure yet



Electric vehicle (EV) penetration across automotive segments is expected to increase exponentially over the next five years, spurred by Government support, enhanced awareness and increasing product launches. Given that battery is the most critical and costly component of an EV, accounting for 35-40% of the cost, battery cell manufacturing has garnered a lot of attention in recent times.



Globally, China dominates the Li-ion battery ecosystem both in terms of raw material processing and manufacturing capacities. Li-ion battery pack prices have declined over the years, with ~20% YoY decline in CY2024, with the significant increase in supply partly leading to the decline in battery pack prices. The global Li-ion battery supply is expected to outpace demand over the medium term.



India currently remains dependent on imports to meet its Li-ion battery cell requirements, with domestic capabilities limited to battery pack assembly. The demand for Li-ion battery cells for EVs in India is expected to reach 11-13 GWh by end of FY2025 and 60-65 GWh by FY2030. Apart from EVs, Li-ion batteries are also likely to attract demand from stationary applications.



Several entities have committed significant investments in the Li-ion battery cell segment in India. Over 150 GWh of Li-ion battery cell capacities are to become operational by 2030, with investments exceeding Rs. 75,000 crore for committed capacities. Some of the localisation is through technology transfers/alliances with overseas battery cell players.



Indian Li-ion battery cell projects fall in the high-risk category. They are exposed to risks arising from time and cost overruns. Further, significant dependence on imports for sourcing raw materials exposes them to geopolitical and region-specific risks for raw materials, and forex fluctuations. There is also offtake risk, till the battery's reliability/performance is proven.

01



Global EV Battery Supply Chain

02



Global Demand-Supply Scenario

03



Indian Li-ion Battery Industry

04



Policy Support

05



Risk Profiling



ICRA

Analytical Contact Details

Name	Designation	Email	Contact Number
Shamsher Dewan	Senior Vice-President and Group Head	shamsherd@icraindia.com	0124 – 4545 328
K Srikumar	Senior Vice-President and Co-Group Head	ksrikumar@icraindia.com	044 – 4596 4318
Vinutaa S	Vice-President and Sector Head	vinutaa.s@icraindia.com	044 – 4596 4305
Sriraman Mohan	Senior Analyst	Sriraman.mohan@icraindia.com	044 – 4596 4316





ICRA

Business Development/Media Contact Details

Name	Designation	Email	Contact Number
L Shivakumar	Chief Business Officer	shivakumar@icraindia.com	022-61693304
Neha Agarwal	Head – Research Sales	neha.agarwal@icraindia.com	022-61693338
Rohit Gupta	Head Business Development – Infrastructure Sector	rohitg@icraindia.com	0124-4545340
Vivek Bhalla	Head Business Development – Financial Sector	vivek.bhalla@icraindia.com	022-61693372
Vinita Baid	Head Business Development – Corporate Sector - West & East	vinita.baid@icraindia.com	033-71501131
Shivam Bhatia	Head Business Development – Corporate Sector - North & South	shivam.bhatia@icraindia.com	0124-4545803
Naznin Prodhani	Head – Group Corporate Communications & Media Relations	communications@icraindia.com	0124-4545860





© Copyright, 2025 ICRA Limited. All Rights Reserved.

All information contained herein has been obtained by ICRA from sources believed by it to be accurate and reliable. Although reasonable care has been taken to ensure that the information herein is true, such information is provided 'as is' without any warranty of any kind, and ICRA in particular, makes no representation or warranty, express or implied, as to the accuracy, timeliness or completeness of any such information. Also, ICRA or any of its group companies, while publishing or otherwise disseminating other reports may have presented data, analyses and/or opinions that may be inconsistent with the data, analyses and/or opinions in this publication. All information contained herein must be construed solely as statements of opinion, and ICRA shall not be liable for any losses incurred by users from any use of this publication or its contents.



ICRA

Thank You!