India Inc's EV battery-making plans hinge on China imports

Executives from firms that are already part of these supply chains point to a China dominance

AMRITHA PILLAY
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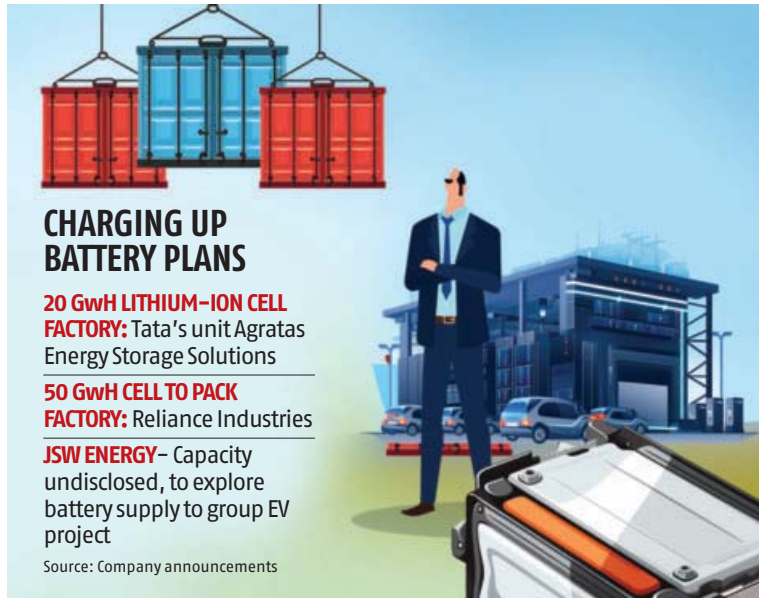
Over the past year, many Indian business groups have announced plans to set up electric vehicle (EV) battery-making facilities, some of them at giga-scale. Industry executives, however, expect these plans to rely heavily on existing import-based supply chains.

Conglomerates like Tata, Reliance Industries Ltd (RIL), and JSW have expressed interest in setting up battery manufacturing facilities in India, using lithium-ion-based technology, though little has been shared on the required sourcing of lithium.

An email query sent to Tata, RIL, and JSW, requesting details on lithium sourcing, remained unanswered.

Existing supply chain possibilities for Indian manufacturers are heavily dependent on imports, particularly from China, and not much is expected to change soon, industry executives said.

"Indian companies don't invest heavily in R&D (research and development). The model most will follow will be to tie up with the most viable technology available in the market at that point, and that technology partner will decide the supply chain depending on economic viability," said an executive, whose company is also exploring options in the battery manufacturing segment. The executive agreed that many of these supply chains had a China presence.



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Executives from companies that are already part of these supply chains point out a China dominance. "Currently, the only available source that can supply at scale is China, as it has over the years channelled and controlled the raw material supply chain and made both the vendors (miners) and the consumers (battery/cell manufacturers) dependent on them," said Anjani Sri Mourya Sunkavalli, founder and managing director for Altmin, a battery materials provider.

A second industry executive, who is also exploring battery manufacturing in India, said: "While some have started work on the factories, building the supply chain side through tie-ups is pending."

Vikram Handa, chairperson, CII core group on raw materials for battery and managing director for Epsilon Carbon, estimates that each 20 GwH of battery manufacturing capacity would require 35,000 tonnes of CAM (Cathode Active Materials), which would require 10-12,000 tonnes of lithium carbonate based on Nickel Manganese Cobalt (NMC) or Lithium Iron Phosphate (LFP) chemistry.

In February, India announced its first ever find of lithium resources in Jammu and Kashmir and the auctions are expected before the end of the year, as indicated by sources from the mines ministry. "I think developing lithium mines in India will take 5-7 years, just like they take in other parts of the world, but spodumene (a lithium aluminum silicate mineral in the pyroxene family) can be imported from Australia or South America and processed into battery-grade lithium carbonate in India," Handa said.

The processing also remains heavily dependent on China for more than 90 per cent of the requirements, industry executives noted.

"We have partnered with some of the mines-cum-refiners in South America alongside YLB, Bolivia for our lithium supply chain requirements. However, other companies involved in mining or with access to spodumene still need to export this to China for refining as they dominate the refining segment," said Sunkavalli from Altmin.