



Achintya Securities Limited

India's ₹12,000 Crore Upstream Pivot

Securing the DNA of the Electric
Vehicle Supply Chain



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Introduction

India is embarking on a highly strategic phase in its quest for energy security and electric mobility. For the past few years, the government's policy framework has heavily incentivised the final stages of the Electric Vehicle (EV) ecosystem—specifically battery cell assembly and vehicle manufacturing. However, assembling cells without domestic raw materials is akin to building a house on borrowed foundations.

To bridge this critical vulnerability, the government's attention is decisively shifting upstream. By introducing a new incentive scheme aimed directly at the foundational components of lithium-ion batteries, India is attempting to completely sever its import dependence and create a truly self-reliant energy ecosystem. Let us deeply explore the mechanics of this proposed Battery Component Scheme, the geopolitical imperatives driving it, and the lucrative frontiers it opens for investors.



The ₹12,000 Crore Masterstroke: Shifting from Assembly to Value Addition

The Government of India is currently finalising a monumental ₹12,000 crore (approx. \$1.4 billion) incentive scheme dedicated entirely to the domestic production of advanced battery components. Unlike previous schemes that rewarded the final output (the battery cell), this initiative targets the chemical and metallurgical "DNA" of the battery:

- **Cathode Active Material (CAM)**
- **Anode Active Material (AAM)**
- **Electrolytes**
- **Copper Foil Separators**

A crucial differentiator of this new policy is its stringent value-addition mandate. The government intends to implement strict conditions to prevent companies from merely importing near-finished materials and performing final-stage processing (often termed "screwdriver technology") just to claim subsidies. Genuine, deep-tier domestic manufacturing will be the only path to accessing these funds.

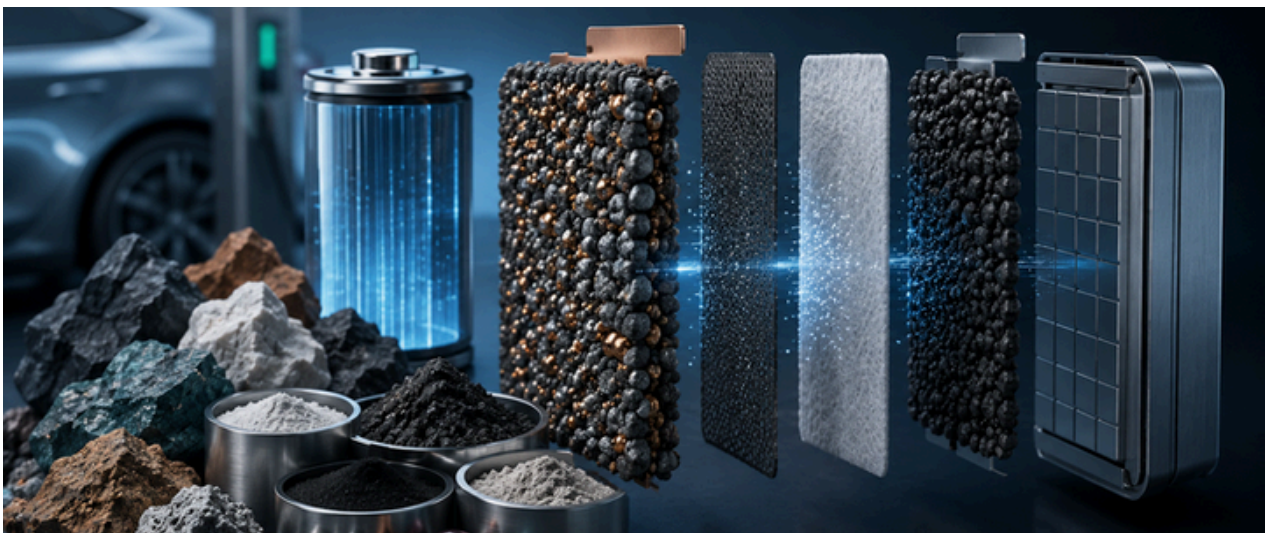
This scheme operates entirely independently of the existing ₹18,100 crore Advanced Chemistry Cell (ACC) PLI scheme, acting as a feeder ecosystem to ensure the ACC scheme actually succeeds.

The Anatomy of a Battery: Why These Components Matter

To understand the strategic importance of this scheme, one must look at the cost breakdown of a standard lithium-ion battery cell. The raw materials dictate the economics of the entire EV industry.

- **Cathode Active Material (CAM):** Comprising metals like Lithium, Nickel, Manganese, and Cobalt (or Iron Phosphate in LFP batteries), the cathode determines the battery's energy density and range. It is the most expensive component, accounting for roughly 50% of the cell's material cost.
- **Anode Active Material (AAM):** Primarily made of highly purified natural or synthetic graphite, the anode stores the lithium ions when the battery is charged. It accounts for about 10-15% of the cost.
- **Electrolytes & Separators:** These facilitate the safe movement of ions between the anode and cathode while preventing catastrophic short circuits.

Combined, CAM and AAM alone represent nearly 70% of the total material cost of a battery. Currently, India is essentially 100% dependent on imports for these critical components, exposing the nation to severe supply chain shocks and currency fluctuations.



The Data: Demand Trajectories and The Import Trap

The urgency of this scheme is underscored by India's explosive demand projections. India has already announced nearly 223 GWh of battery manufacturing capacity in the private sector.

According to joint research by IEEFA and JMK Research, India's battery demand is on an exponential curve:

- **2025 Demand:** 28 GWh
- **2030 Projected Demand:** 272 GWh

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To feed this 272 GWh monster by 2030, India will require:

- Over 4,00,000 tonnes of CAM
- Over 2,00,000 tonnes of AAM

Currently, the geopolitical reality is stark. According to an April 2026 IEEFA report, India imported 18,200 tonnes of lithium compounds in 2025 alone, valued at approximately \$1.2 billion. Crucially, 68% of this supply originated from China. Without domestic upstream capabilities, India's transition from imported crude oil to imported Chinese battery chemicals would merely substitute one energy vulnerability for another.

Diagnosing the ACC PLI Bottleneck

Why is this new scheme necessary when the ₹18,100 crore ACC PLI already exists? The data reveals a significant bottleneck.

Out of the targeted 50 GWh capacity under the ACC PLI scheme, merely 1.4 GWh (about 2.8%) has become operational to date (with Ola Electric holding the major share). Investments have stalled at ₹28.7 billion (just 26% of the target), and employment generation has been sluggish, yielding only 1,118 jobs against a one-million target.

The primary culprit for this stagnation is the absence of a localized upstream supply chain. Cell manufacturers are hesitant to scale up billion-dollar giga-factories when they have to import 100% of their active materials at volatile global spot prices. The ₹12,000 crore component scheme is the precise antidote to this paralysis.



Breaking the Copper Foil Monopoly

Beyond CAM and AAM, the global supply of battery-grade copper foil—an ultra-thin, highly engineered material essential for the anode current collector—is heavily monopolised.

- **Chinese dominance:** ~80% of global production capacity.
- **South Korean control:** ~20% of global capacity.
- **India's current status:** Imports 80-85% of its requirements.

Recognising this strategic gap, domestic giants are stepping up. In March 2025, Hindalco announced a massive ₹45,000 crore investment programme, which includes establishing India's very first EV copper foil plant. Initiatives like these, heavily backed by the upcoming component PLI, will structurally de-risk India's EV ambitions.



What Does This Mean for Investors?

For investors, the shift from downstream assembly to upstream deep-tech manufacturing represents a highly lucrative, high-moat investment theme. The beneficiaries of this ₹12,000 crore scheme will likely be companies with deep metallurgical, chemical, and refining expertise.

Key investment pockets include:

- 1. Graphite and Carbon Specialists:** Companies like HEG (which is aggressively developing graphite anode facilities) and Graphite India (expanding via strategic state agreements) are prime candidates to dominate the domestic AAM market.
- 2. Non-Ferrous Metals & Copper Producers:** Hindalco's aggressive pivot into battery-grade copper foils places it at the forefront of the EV component Supercycle.
- 3. Specialty Chemicals:** Electrolyte manufacturing requires highly complex fluorine chemistry. Leading Indian specialty chemical companies with existing competencies in fluorochemicals and battery salts (like LiPF₆) stand to capture massive supply contracts from cell manufacturers.
- 4. Capital Goods Suppliers:** The engineering firms that design, build, and supply the heavy machinery required for chemical refining, foil rolling, and mineral processing will see a massive influx of order books as these new plants are commissioned.

What's Next?

India is decisively moving away from being a mere consumer of green technology to becoming an integrated producer.

The proposed Battery Component Scheme is the missing puzzle piece that will anchor the ₹18,100 crore ACC PLI scheme. Furthermore, macroeconomic policies are aligning with this vision; the recent Budget 2026-27 extended the basic customs duty exemption on capital goods used in lithium-ion cell manufacturing, significantly lowering the Capex burden for new entrants.

As the government finalises the contours of this ₹12,000 crore initiative, the focus over the next 12 to 24 months will be on rapid capacity building. For the vigilant investor, the entire value chain—from graphite refiners to specialty chemical innovators—is flashing green, signalling a multi-decade structural growth story rooted in true self-reliance.





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