

## **India Battery Recycling Market Forecast 2026-2034**

Market Report | 2026-01-19 | 143 pages | Inkwood Research

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### **Report description:**

#### **KEY FINDINGS**

The India battery recycling market size is set to be valued at \$531.84 million as of 2026 and is expected to reach \$1,996.03 million by 2034, progressing with a CAGR of 17.98% during the forecast years, 2026-2034.

#### **MARKET INSIGHTS**

The India battery recycling market demonstrates explosive growth driven by unprecedented electric vehicle adoption and stringent regulatory frameworks mandating extended producer responsibility. In May 2025, the Battery Waste Management Rules were fully enforced, introducing Extended Producer Responsibility for electric vehicle OEMs and battery manufacturers with phase-wise recovery targets increasing from 70% in FY 2025 to 90% by FY 2027 for lithium-ion batteries in EVs. These regulations transform market dynamics by creating legal obligations for systematic battery collection and processing nationwide.

Moreover, the policy covers all entities throughout battery lifecycles, requiring recyclers to register with state pollution control boards, ensuring comprehensive oversight. Electric two-wheelers lead adoption, capturing around 60% of EV sales in 2024 with approximately 1.2 million units sold. Leading manufacturers, including Ola Electric, TVS Motor Company, and Ather Energy, control over the majority of this segment, generating significant battery replacement demand cycles. Furthermore, electric three-wheelers (E3Ws) account for approximately 57% of total three-wheeler sales in India as of FY2025, a rapid transition from internal combustion engines (ICE). Consequently, diverse battery chemistries and form factors enter recycling streams, requiring flexible processing capabilities.

The Indian government recognizes the importance of sustainable EV battery management, taking significant regulatory and financial steps to establish well-structured recycling ecosystems. These mandates create guaranteed demand for recycled materials, driving recycler investments in high-purity recovery technologies. Additionally, environmental compensation mechanisms impose financial penalties on non-compliant entities based on polluter-pays principles. The Central Pollution Control Board issued guidelines in September 2024 calculating compensation covering handling, collection, transportation, and processing costs.

Moreover, government incentives for Advanced Chemistry Cell manufacturing under Production-Linked Incentive schemes create downstream demand for recycled battery materials. Consequently, recyclers align capacity expansions with domestic cell manufacturing growth, supporting circular supply chains. State governments roll out dedicated EV and material recovery parks, attracting recycling investments through infrastructure support and streamlined approvals. These industrial zones cluster battery dismantling, chemical processing, and material refining operations, optimizing logistics and knowledge sharing.

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Strong activity from startups and established conglomerates drives rapid lithium-ion battery recycling capacity expansion across multiple regions. Companies such as Attero Recycling, Lohum, and Ecolife have significantly expanded recycling activities, with Attero planning to recycle 15,000 tons of lithium-ion batteries in FY 2024-25, aiming to reach 50,000 tons annually by 2027, with recovery rates exceeding 95% for critical metals including lithium, cobalt, and nickel. These aggressive expansion plans demonstrate market confidence and technology maturation.

Lohum, with a large processing capacity of approximately 10,000 TPA, plans to expand significantly by 2025, with additional expansion plans outside India in the UAE for a 3,000 TPA plant. Furthermore, traditional e-waste recyclers expand horizontally into battery recycling, leveraging existing collection networks and hazardous material handling expertise. Companies adopt hydrometallurgical processing predominantly over pyrometallurgical methods, considering capital efficiency and material recovery advantages.

Automakers and battery OEMs form long-term agreements with recyclers, establishing closed-loop supply chains. These partnerships guarantee feedstock availability for recyclers while securing compliant material sources for manufacturers. AI-enabled sorting and automation solutions deploy to improve operational efficiency and worker safety simultaneously. Digital tracking systems enhance traceability from collection through final material recovery, supporting regulatory compliance and quality assurance.

#### SEGMENTATION ANALYSIS

The India battery recycling market is segmented into chemistry, application, recycling process, and source. The application segment is further categorized into transportation, consumer electronics, industrial, and other applications.

The consumer electronics application segment maintains a substantial market presence driven by India's massive smartphone, laptop, and portable device markets, creating consistent battery replacement cycles. India ranks as one of the world's largest smartphone markets, with approximately 120 million 5G smartphones shipped in 2024. These devices utilize lithium-ion batteries requiring replacement after 2-3 years of intensive usage. Moreover, laptop computers, tablets, power banks, and wireless accessories contribute additional battery volumes. Urban consumers upgrade devices frequently, creating steady e-waste streams entering recycling channels.

However, informal recycling sectors dominate consumer electronics battery recovery currently. Unorganized collectors aggregate spent devices from households and commercial establishments. Subsequently, informal processors extract valuable metals through crude methods lacking environmental controls. Nevertheless, formal recyclers expand consumer electronics programs, competing with informal sectors through convenient collection services. Companies establish drop-off points at retail stores, service centers, and residential complexes, improving accessibility.

Additionally, awareness campaigns educate consumers about proper disposal practices and the environmental impacts of informal recycling. Digital platforms enable doorstep collection services where consumers schedule pickups through mobile applications. These convenience-focused approaches attract environmentally conscious consumers willing to participate in formal recycling programs. Furthermore, mandatory extended producer responsibility regulations push electronics manufacturers toward authorized recycler partnerships.

Compliance requirements create structured collection systems channeling batteries away from informal processors. The segment faces logistical challenges aggregating small-format batteries scattered across vast geographic areas. Transportation costs escalate when collecting low-value batteries from distributed sources, requiring economies of scale optimization.

#### COMPETITIVE INSIGHTS

Some of the top players operating in the India battery recycling market include Attero Recycling, Lohum Cleantech Private Limited, Gravita India Limited, Exigo Recycling, etc.

Attero Recycling operates as India's leading end-to-end electronic waste and lithium-ion battery recycling company, headquartered in Uttarakhand with comprehensive processing capabilities. The company specializes in recovering critical materials from end-of-life batteries, consumer electronics, and industrial waste streams using advanced hydrometallurgical technologies.

Attero maintains strategic partnerships with major automotive manufacturers, including MG Motors, Tata Motors, and Hyundai, securing long-term battery supply agreements. These collaborations provide predictable feedstock volumes enabling capacity planning and technology investments. The company achieves industry-leading recovery rates exceeding 95% for lithium, cobalt,

nickel, and other valuable metals. Their proprietary processes produce battery-grade materials meeting stringent quality specifications for cathode manufacturing.

Attero emphasizes environmental sustainability through zero-discharge operations and renewable energy utilization. The company's integrated approach encompasses collection logistics, safe transportation, automated dismantling, chemical extraction, and material purification, creating complete circular value chains supporting India's battery manufacturing ambitions.

#### COMPANY PROFILES

1. □ EXIDE TECHNOLOGIES
2. □ UMICORE SA
3. □ GS YUASA CORPORATION
4. □ GRAVITA INDIA LIMITED
5. □ ATTERO RECYCLING
6. □ LOHUM CLEANTECH PRIVATE LIMITED
7. □ NILE LIMITED
8. □ TATA CHEMICALS LIMITED
9. □ AMARA RAJA ENERGY & MOBILITY LIMITED

#### Table of Contents:

##### TABLE OF CONTENTS

1. □ RESEARCH SCOPE & METHODOLOGY
  - 1.1. STUDY OBJECTIVES
  - 1.2. METHODOLOGY
  - 1.3. ASSUMPTIONS & LIMITATIONS
2. □ EXECUTIVE SUMMARY
  - 2.1. MARKET SIZE & FORECAST
  - 2.2. MARKET OVERVIEW
  - 2.3. SCOPE OF STUDY
  - 2.4. CRISIS SCENARIO ANALYSIS
  - 2.5. MAJOR MARKET FINDINGS
    - 2.5.1. INDIA IS EXPERIENCING A SHARP RISE IN SPENT BATTERY VOLUMES AS EV ADOPTION AND INDUSTRIAL POWER BACKUP DEMAND GROW
    - 2.5.2. THE MARKET IS UNDERGOING RAPID REGULATORY TIGHTENING UNDER THE BATTERY WASTE MANAGEMENT RULES 2022
    - 2.5.3. STRONG ACTIVITY FROM STARTUPS AND LARGE CONGLOMERATES IS DRIVING THE FAST EXPANSION OF LITHIUM ION RECYCLING CAPACITY
    - 2.5.4. POLICY FOCUS ON LOCALIZED CRITICAL MINERAL RECOVERY IS POSITIONING INDIA AS A FUTURE ASIAN RECYCLING HUB
3. □ MARKET DYNAMICS
  - 3.1. KEY DRIVERS
    - 3.1.1. EXPLOSIVE GROWTH IN ELECTRIC TWO-WHEELERS AND ENERGY STORAGE SYSTEMS IS BOOSTING FUTURE BATTERY DISPOSAL VOLUMES
    - 3.1.2. MANDATORY EXTENDED PRODUCER RESPONSIBILITY RULES ARE IMPROVING FORMAL COLLECTION AND PROCESSING RATES
    - 3.1.3. GOVERNMENT INCENTIVES FOR ADVANCED CHEMISTRY CELL MANUFACTURING ARE CREATING DOWNSTREAM DEMAND FOR RECYCLING
    - 3.1.4. INCREASING PRIVATE INVESTMENT IN HYDROMETALLURGY AND AUTOMATED DISMANTLING PLANTS IS ENHANCING MATERIAL RECOVERY
  - 3.2. KEY RESTRAINTS
    - 3.2.1. A LARGE INFORMAL RECYCLING SECTOR CONTINUES TO UNDERCUT SAFETY STANDARDS AND REDUCE FORMAL COLLECTION VOLUMES
    - 3.2.2. TECHNOLOGY GAPS AND HIGH CAPEX REQUIREMENTS ARE SLOWING THE SCALE UP OF ADVANCED LITHIUM ION RECYCLING

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## FACILITIES

3.2.3. LOGISTICAL CHALLENGES IN SAFE INTERSTATE TRANSPORT OF HAZARDOUS BATTERIES ARE CREATING OPERATIONAL BOTTLENECKS

3.2.4. LIMITED DOMESTIC SOURCING OF HIGH PURITY CHEMICALS IS IMPACTING THE ECONOMICS OF CATHODE MATERIAL RECOVERY

## 4. KEY ANALYTICS

### 4.1. KEY MARKET TRENDS

4.1.1. STATE GOVERNMENTS ARE ROLLING OUT EV AND MATERIAL RECOVERY PARKS TO ATTRACT RECYCLING INVESTMENTS

4.1.2. AUTOMAKERS AND BATTERY OEMS ARE FORMING LONG-TERM AGREEMENTS WITH RECYCLERS FOR CLOSED-LOOP SUPPLY CHAINS

4.1.3. AI-ENABLED SORTING AND AUTOMATION SOLUTIONS ARE BEING DEPLOYED TO IMPROVE EFFICIENCY AND SAFETY

4.1.4. SECOND LIFE APPLICATIONS FOR EV BATTERIES ARE EXPANDING ACROSS TELECOM, RENEWABLE ENERGY, AND BACKUP POWER USE CASES

### 4.2. PORTER'S FIVE FORCES ANALYSIS

4.2.1. BUYERS POWER

4.2.2. SUPPLIERS POWER

4.2.3. SUBSTITUTION

4.2.4. NEW ENTRANTS

4.2.5. INDUSTRY RIVALRY

### 4.3. GROWTH PROSPECT MAPPING

4.3.1. GROWTH PROSPECT MAPPING FOR INDIA

### 4.4. MARKET MATURITY ANALYSIS

### 4.5. MARKET CONCENTRATION ANALYSIS

### 4.6. VALUE CHAIN ANALYSIS

4.6.1. BATTERY COLLECTION

4.6.2. LOGISTICS HANDLING

4.6.3. DISASSEMBLY OPERATIONS

4.6.4. CHEMICAL PROCESSING

4.6.5. MATERIAL SEPARATION

4.6.6. REFINED OUTPUTS

4.6.7. OEM REINTEGRATION

### 4.7. KEY BUYING CRITERIA

4.7.1. RECOVERY EFFICIENCY

4.7.2. PROCESS COSTS

4.7.3. REGULATORY COMPLIANCE

4.7.4. MATERIAL PURITY

### 4.8. REGULATORY FRAMEWORK

## 5. BATTERY RECYCLING MARKET BY CHEMISTRY

### 5.1. LEAD-ACID

5.1.1. MARKET FORECAST FIGURE

5.1.2. SEGMENT ANALYSIS

### 5.2. NICKEL-BASED

5.2.1. MARKET FORECAST FIGURE

5.2.2. SEGMENT ANALYSIS

### 5.3. LITHIUM-BASED

5.3.1. MARKET FORECAST FIGURE

5.3.2. SEGMENT ANALYSIS

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- 5.4. OTHERS
  - 5.4.1. MARKET FORECAST FIGURE
  - 5.4.2. SEGMENT ANALYSIS
- 6. BATTERY RECYCLING MARKET BY APPLICATION
  - 6.1. TRANSPORTATION
    - 6.1.1. MARKET FORECAST FIGURE
    - 6.1.2. SEGMENT ANALYSIS
  - 6.2. CONSUMER ELECTRONICS
    - 6.2.1. MARKET FORECAST FIGURE
    - 6.2.2. SEGMENT ANALYSIS
  - 6.3. INDUSTRIAL
    - 6.3.1. MARKET FORECAST FIGURE
    - 6.3.2. SEGMENT ANALYSIS
  - 6.4. OTHER APPLICATIONS
    - 6.4.1. MARKET FORECAST FIGURE
    - 6.4.2. SEGMENT ANALYSIS
- 7. BATTERY RECYCLING MARKET BY RECYCLING PROCESS
  - 7.1. HYDROMETALLURGY
    - 7.1.1. MARKET FORECAST FIGURE
    - 7.1.2. SEGMENT ANALYSIS
  - 7.2. PYROMETALLURGY
    - 7.2.1. MARKET FORECAST FIGURE
    - 7.2.2. SEGMENT ANALYSIS
  - 7.3. LEAD ACID BATTERY RECYCLING PROCESS
    - 7.3.1. MARKET FORECAST FIGURE
    - 7.3.2. SEGMENT ANALYSIS
  - 7.4. LITHIUM-ION BATTERY RECYCLING PROCESS
    - 7.4.1. MARKET FORECAST FIGURE
    - 7.4.2. SEGMENT ANALYSIS
- 8. BATTERY RECYCLING MARKET BY SOURCE
  - 8.1. AUTOMOTIVE BATTERIES
    - 8.1.1. MARKET FORECAST FIGURE
    - 8.1.2. SEGMENT ANALYSIS
  - 8.2. INDUSTRIAL BATTERIES
    - 8.2.1. MARKET FORECAST FIGURE
    - 8.2.2. SEGMENT ANALYSIS
  - 8.3. CONSUMER ELECTRONICS
    - 8.3.1. MARKET FORECAST FIGURE
    - 8.3.2. SEGMENT ANALYSIS
- 9. COMPETITIVE LANDSCAPE
  - 9.1. KEY STRATEGIC DEVELOPMENTS
    - 9.1.1. MERGERS & ACQUISITIONS
    - 9.1.2. PRODUCT LAUNCHES & DEVELOPMENTS
    - 9.1.3. PARTNERSHIPS & AGREEMENTS
    - 9.1.4. BUSINESS EXPANSIONS & DIVESTITURES
  - 9.2. COMPANY PROFILES
    - 9.2.1. EXIDE TECHNOLOGIES

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- 9.2.1.1. COMPANY OVERVIEW
- 9.2.1.2. PRODUCTS
- 9.2.1.3. STRENGTHS & CHALLENGES
- 9.2.2. UMICORE SA
- 9.2.2.1. COMPANY OVERVIEW
- 9.2.2.2. PRODUCTS
- 9.2.2.3. STRENGTHS & CHALLENGES
- 9.2.3. GS YUASA CORPORATION
- 9.2.3.1. COMPANY OVERVIEW
- 9.2.3.2. PRODUCTS
- 9.2.3.3. STRENGTHS & CHALLENGES
- 9.2.4. GRAVITA INDIA LIMITED
- 9.2.4.1. COMPANY OVERVIEW
- 9.2.4.2. PRODUCTS
- 9.2.4.3. STRENGTHS & CHALLENGES
- 9.2.5. ATTERO RECYCLING
- 9.2.5.1. COMPANY OVERVIEW
- 9.2.5.2. PRODUCTS
- 9.2.5.3. STRENGTHS & CHALLENGES
- 9.2.6. LOHUM CLEANTECH PRIVATE LIMITED
- 9.2.6.1. COMPANY OVERVIEW
- 9.2.6.2. PRODUCTS
- 9.2.6.3. STRENGTHS & CHALLENGES
- 9.2.7. NILE LIMITED
- 9.2.7.1. COMPANY OVERVIEW
- 9.2.7.2. PRODUCTS
- 9.2.7.3. STRENGTHS & CHALLENGES
- 9.2.8. TATA CHEMICALS LIMITED
- 9.2.8.1. COMPANY OVERVIEW
- 9.2.8.2. PRODUCTS
- 9.2.8.3. STRENGTHS & CHALLENGES
- 9.2.9. AMARA RAJA ENERGY & MOBILITY LIMITED
- 9.2.9.1. COMPANY OVERVIEW
- 9.2.9.2. PRODUCTS
- 9.2.9.3. STRENGTHS & CHALLENGES

## LIST OF TABLES

TABLE 1: MARKET SNAPSHOT - BATTERY RECYCLING

TABLE 2: MARKET BY CHEMISTRY, HISTORICAL YEARS, 2022-2024 (IN \$ MILLION)

TABLE 3: MARKET BY CHEMISTRY, FORECAST YEARS, 2026-2034 (IN \$ MILLION)

TABLE 4: MARKET BY APPLICATION, HISTORICAL YEARS, 2022-2024 (IN \$ MILLION)

TABLE 5: MARKET BY APPLICATION, FORECAST YEARS, 2026-2034 (IN \$ MILLION)

TABLE 6: MARKET BY RECYCLING PROCESS, HISTORICAL YEARS, 2022-2024 (IN \$ MILLION)

TABLE 7: MARKET BY RECYCLING PROCESS, FORECAST YEARS, 2026-2034 (IN \$ MILLION)

TABLE 8: MARKET BY SOURCE, HISTORICAL YEARS, 2022-2024 (IN \$ MILLION)

TABLE 9: MARKET BY SOURCE, FORECAST YEARS, 2026-2034 (IN \$ MILLION)

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TABLE 10: KEY PLAYERS OPERATING IN THE INDIAN MARKET

TABLE 11: LIST OF MERGERS & ACQUISITIONS

TABLE 12: LIST OF PRODUCT LAUNCHES & DEVELOPMENTS

TABLE 13: LIST OF PARTNERSHIPS & AGREEMENTS

TABLE 14: LIST OF BUSINESS EXPANSIONS & DIVESTITURES

LIST OF FIGURES

FIGURE 1: KEY MARKET TRENDS

FIGURE 2: PORTER'S FIVE FORCES ANALYSIS

FIGURE 3: GROWTH PROSPECT MAPPING FOR INDIA

FIGURE 4: MARKET MATURITY ANALYSIS

FIGURE 5: MARKET CONCENTRATION ANALYSIS

FIGURE 6: VALUE CHAIN ANALYSIS

FIGURE 7: KEY BUYING CRITERIA

FIGURE 8: SEGMENT GROWTH POTENTIAL, BY CHEMISTRY, IN 2025

FIGURE 9: LEAD-ACID MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 10: NICKEL-BASED MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 11: LITHIUM-BASED MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 12: OTHERS CHEMISTRY MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 13: SEGMENT GROWTH POTENTIAL, BY APPLICATION, IN 2025

FIGURE 14: TRANSPORTATION MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 15: CONSUMER ELECTRONICS MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 16: INDUSTRIAL MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 17: OTHER APPLICATIONS MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 18: SEGMENT GROWTH POTENTIAL, BY RECYCLING PROCESS, IN 2025

FIGURE 19: HYDROMETALLURGY MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 20: PYROMETALLURGY MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 21: LEAD-ACID BATTERY RECYCLING PROCESS MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 22: LITHIUM-ION BATTERY RECYCLING PROCESS MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 23: SEGMENT GROWTH POTENTIAL, BY SOURCE, IN 2025

FIGURE 24: AUTOMOTIVE BATTERIES MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 25: INDUSTRIAL BATTERIES MARKET SIZE, 2026-2034 (IN \$ MILLION)

FIGURE 26: CONSUMER ELECTRONICS MARKET SIZE, 2026-2034 (IN \$ MILLION)

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