Battery Pack Aadhaar Number (BPAN) System

Published On: 04-01-2026

The Ministry of Road Transport and Highways (MoRTH) has issued draft **Guidelines for Implementation of Battery Pack Aadhaar System**, introducing a digital identity framework for batteries.

- **Mechanism (BPAN):** A **21-character unique alphanumeric code** and QR code assigned to every battery pack. It acts as a "Battery Passport" for end-to-end traceability.
- **Implementation Phases:**
- **Phase 1 (Priority):** Electric Vehicle (EV) batteries (which account for 80–90% of Li-ion demand).
- **Phase 2:** Industrial batteries with a capacity **>2 kWh**.
- **Data Structure:**
- **Static Data:** Material composition, manufacturer details, and carbon footprint (publicly accessible).
- **Dynamic Data:** Real-time health (SOH), charge/discharge cycles, and thermal events (restricted to authorized stakeholders like recyclers).
- **Significance for India:**
- **PLI Scheme Alignment:** Helps verify "domestic value addition" for the **Advanced Chemistry Cell (ACC)** PLI scheme.
- **Circular Economy:** Simplifies "second-life" repurposing for stationary energy storage.
- **Safety:** Tracks batteries prone to thermal incidents, reducing counterfeit products.