EV Conversion Workshop: Kolkata

Transforming Kolkata's transportation landscape through strategic EV retrofitting. A ₹2 crore investment targeting India's 30% EV penetration goal by 2030.

Market Opportunity

National Growth

India's EV market surging from USD 12.09B (2024) to USD 69.22B by 2033, with 28.52% CAGR. Retrofit segment growing at 9% annually.

Sales reached 2.18M units (Nov 2024-Oct 2025), with 95% being two-wheelers.

Kolkata Advantage

~2 million vehicles registered as of 2025, with 16,975 additions in Jan-Feb alone. 245 new charging stations planned.

Potential market: 20,000 conversions annually at 1% adoption rate.

Project Scope

Facility

5,000 sq ft workshop in Howrah with 20 conversion bays, NH-16 access for logistics.

Target Vehicles

Cars (Maruti Swift) and 2W (Hero Splendor) with full ARAI certification.

Team

30 staff: 10 engineers, 16 technicians, 4 admin personnel.

01

Setup & ARAI Certification

Months 1-3

02

Pilot Program

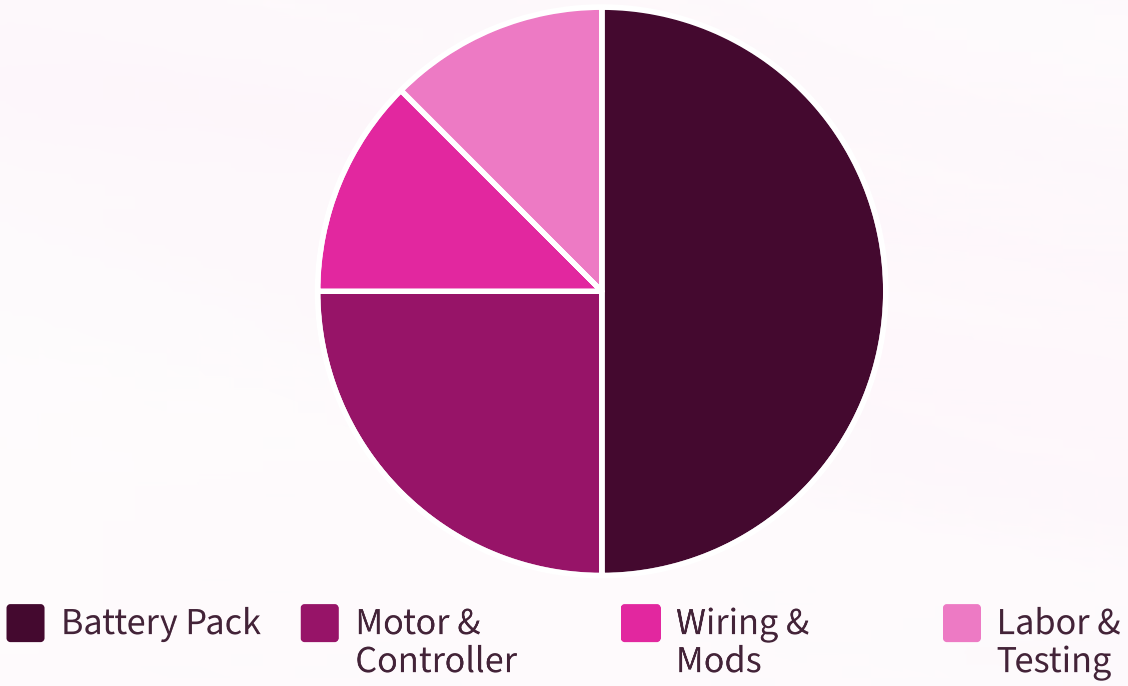
Month 4: 20 conversions

03

Full Operations

Year 1 onwards

Conversion Economics



Pricing Structure

Cars: ₹5 lakh revenue, ₹4 lakh cost (₹3.2L after 20% subsidy)

Two-Wheelers: ₹70,000 revenue, ₹65,000 cost (₹52K after subsidy)

Margins: 40% post-COGS with government incentives

Customer Value Proposition

70%

Fuel Cost Savings

Electricity at ₹6-8/kWh vs. petrol at ₹110/L delivers 70-80% operational savings.

₹1.8L

Annual Savings

Average customer saves ₹1.5-2 lakh per year on fuel and maintenance costs.

2.2

Years to Payback

Investment recovered in just 2.2 years through operational savings.

Performance Specs

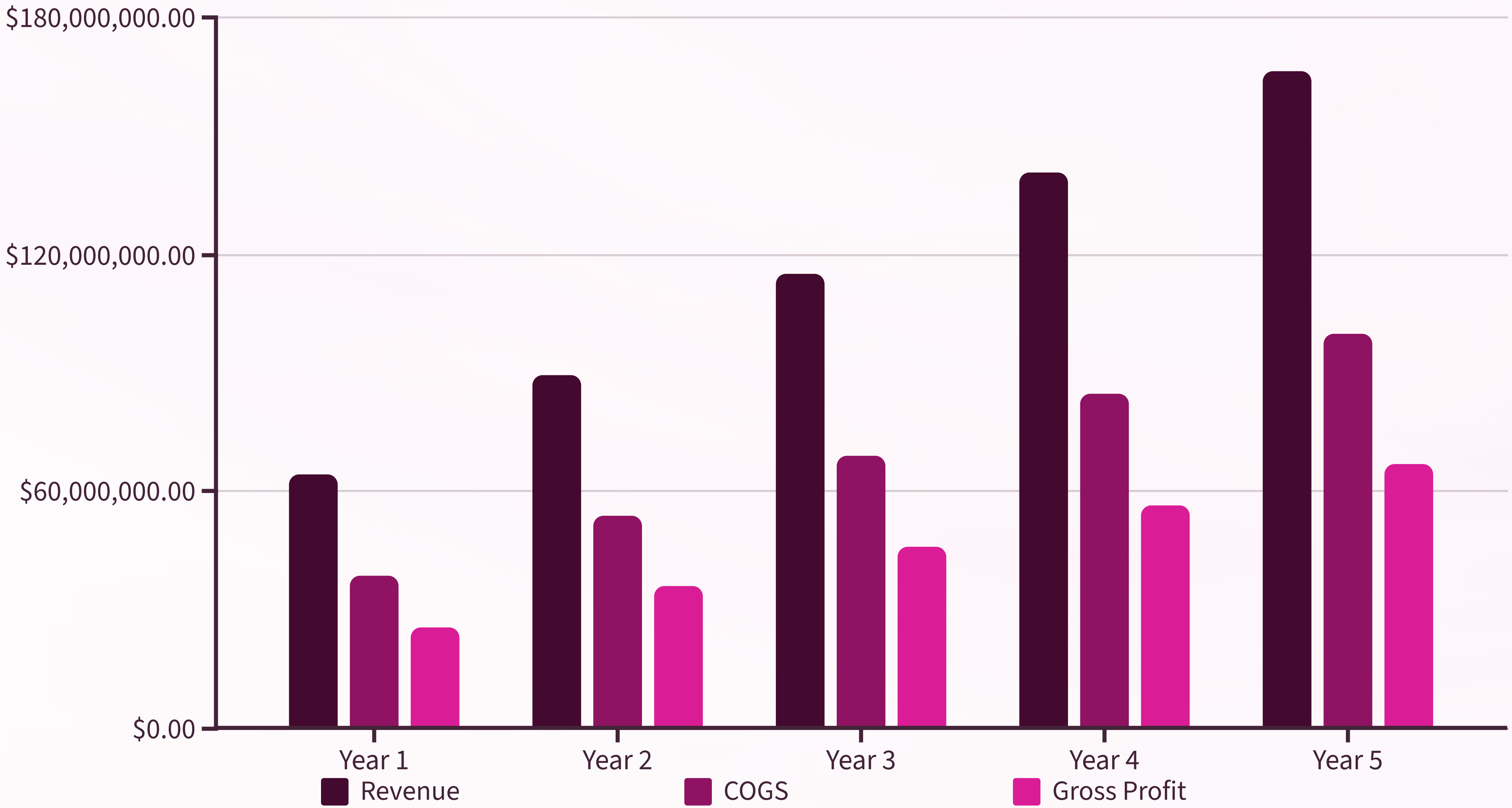
- Range: 150-200 km (cars), 80-100 km (2W)
- Efficiency: 4-5 km/kWh
- Maintenance: 50% lower than fossil fuel

Customer Segments

- Individuals (60%): Fuel savers
- Fleets (30%): TCO reducers
- Corporates (10%): CSR initiatives

5-Year Growth Trajectory

Starting with 100 cars and 200 two-wheelers in Year 1, scaling to 260 cars and 520 two-wheelers by Year 5 with 20% annual growth.



Total 5-Year Revenue: ₹57.6 crore with ₹21.04 crore EBITDA

Exceptional Returns

100%

Internal Rate of Return

Exceptional IRR demonstrating project viability and strong investor appeal.

1904%

5-Year Cumulative ROI

From ₹2 crore investment to ₹19.04 crore cumulative cash flow.

Net Present Value

₹13.22 crore at 10% discount rate, confirming strong value creation over investment period.

Breakeven Timeline

Payback within Year 1 with ₹2.16 crore EBITDA covering initial ₹2 crore investment.

Investment Breakdown

Facility Setup

₹1 crore for 5,000 sq ft workshop lease, infrastructure, and conversion bays in strategic Howrah location.

Equipment & Tools

₹60 lakh for advanced conversion kits, diagnostic equipment, and specialized automotive tools.

Working Capital

₹40 lakh for initial inventory, operational expenses, and cash flow management during ramp-up.

Funding Strategy

MSME loans at 8-10% interest rates. Annual operating expenses: ₹40 lakh (scaled with growth).

Key Partners

Exide for batteries, CMVTE/Loop Moto for technical expertise and component sourcing.

Risk Management

Low Adoption Risk

Probability: Medium | **Impact:** High

Mitigation: RTO partnerships, targeted marketing campaigns, and customer education programs.

Supply Chain Delays

Probability: High | **Impact:** Medium

Mitigation: PLI scheme sourcing, inventory buffers, and multiple supplier relationships.

Policy Changes

Probability: Low | **Impact:** High

Mitigation: Diversification into new EV sales, monitoring West Bengal policy developments.

Sensitivity Analysis: Even with 10% growth (vs. 20% planned), IRR remains strong at ~60%. Without subsidies, IRR drops to 80%, still highly attractive.

Environmental & Social Impact

Carbon Reduction

~1,000 tons CO_2 emissions reduced annually post-conversion, contributing to Kolkata's air quality improvement.

Market Leadership

Target 25% market share in Kolkata's retrofit segment, converting 1,500 cars and 3,000 two-wheelers over 5 years.

National Alignment

Supports India's 30% EV penetration target by 2030, leveraging PM-E-DRIVE and FAME-II initiatives.

Recommendations

Launch Q1 2026

Target FY2027 breakeven

Fleet Pilot

40-unit demonstration program

Policy Monitoring

Track West Bengal incentives