

# Detailed Budget

## 1. Proposed Budget (₦45,000,000)

### 1. Personnel & Research Staff – ₦9,000,000

- Principal Investigator honorarium (24 months) – ₦2,400,000
  - 2 Co-investigators (materials science, mining engineering) – ₦2,400,000
  - 3 Graduate Research Assistants – ₦2,400,000
  - 2 Laboratory Technologists/Technicians – ₦1,800,000
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### 2. Fieldwork, Sampling & Logistics – ₦4,500,000

- Geological mapping & ore sampling (Nasarawa, Kogi, Kwara) – ₦2,000,000
  - Transport & accommodation for field teams – ₦1,200,000
  - Sample preparation, cutting, crushing – ₦1,300,000
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### 3. Laboratory Equipment & Consumables – ₦14,000,000

- Laboratory furnace (up to 1,000–1,200 °C) – ₦3,500,000
  - Ball mill / Pulverizer – ₦2,500,000
  - Magnetic separator & flotation cell (bench scale) – ₦2,500,000
  - Chemicals (H<sub>2</sub>SO<sub>4</sub>, NaOH, HCl, Li reagents, binders, solvents) – ₦2,000,000
  - Glassware, crucibles, PPE, consumables – ₦1,500,000
  - Analytical costs (XRD, SEM-EDS, ICP-OES for Li quantification) – ₦2,000,000
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### 4. Pilot Cell Fabrication & Prototyping – ₦6,000,000

- Cathode (LiFePO<sub>4</sub>) synthesis line – ₦2,000,000
- Anode (graphite/alternative carbon) processing – ₦1,500,000
- Battery cell assembly kits (coin cells & pouch cells) – ₦1,500,000
- Testing equipment (battery cycler, conductivity tester) – ₦1,000,000

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**5. Capacity Building, Training & Workshops – ₦3,500,000**

- Training of research assistants/students in lithium processing – ₦1,500,000
- Stakeholder engagement workshop with industry/government – ₦1,000,000
- Publication support (journal fees, policy briefs) – ₦1,000,000

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**6. Project Management & Administrative Costs – ₦5,000,000**

- Project coordination & reporting – ₦1,500,000
- Communication, ICT, software (COMSOL, OriginLab, etc.) – ₦1,000,000
- Administrative overheads (10%) – ₦2,500,000

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**7. Contingency (5%) – ₦3,000,000**

Reserved for inflation, equipment maintenance, and unforeseen expenses.

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**Total = ₦45,000,000**