NOTICE INVITING REQUEST FOR PROPOSAL

Tender No.: TrEST/69/2025/Tender-001 Date: 13/01/2026

Global Call for Proposals (Companies having a registred office in India): Strategic partnership for advanced pilot production and commercialization, including resource mobilization and marketing of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium. Operations will commence at Travancore Titanium Products Ltd. (TTPL), leading to full-scale manufacturing within the proposed Kerala EV Industrial Park. The RFP document can be downloaded from the Kerala e-Tender website: `https://etenders.kerala.gov.in`, as per the schedule provided below.

Trivandrum Engineering Science & Technology Research Park
TC-4/2322, GEM Building , Opposite CET,
College of Engineering Trivandrum
Kerala State 695016
Phone: 0471- 2598555 / 9188933426
`trestpark@kerala.gov.in`

Tender Details

1. Name of Work	Selection of manufacturing companies in advanced pilot production and commercialization, including resource mobilization and marketing of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium. Operations will commence at Travancore Titanium Products Ltd. (TTPL), leading to full-scale manufacturing within the proposed Kerala EV Industrial Park.
2. Tender ID	2025/TrEST/.....
3. Tender Type & Currency	Open Tender, Indian Rupees
4. Estimate Amount (PAC)	Rs. 80,00,00,000/-
5. Cost of Bid Documents / Processing Fee	Rs. 25,000/- + GST
6. Earnest Money Deposit (EMD)	Rs. 80,00,000/- to be remitted through the online payment mechanism of the e-Procurement system, GoK. EMD of unsuccessful bidders will be refunded within 30 days of finalization.
7. Period of Contract	3 Years
***Critical Date Sheet**	
8. Date of Tender Publishing	13.01.2026
9. Bid Document Download Start Date	13.01.2026
10. Last Date for Receipt of Queries	20.01.2026
11. Pre-Bid Meeting	27.01.2026, 11.00 AM
12. Corrigendum Publication (if any)	02.02.2026, 10.00 AM
13. Bid Submission Start Date	02.02.2026, 10.00 AM
14. Bid Submission End Date	27.02.2026, 05.00 PM
15. Bid Opening Date	03.03.2026, 03.00 PM
16. RFP Availability Website	`https://etenders.kerala.gov.in`
17. Pre-bid Meeting Details	Schedule to be updated at `https://trestpark.org`

18. Bid Opening Location	Office of CEO, Trivandrum Engineering Science & Technology Research Park, TC-4/2322, GEM Building , Opposite CET, College of Engineering Trivandrum, Kerala State - 695016

Bids shall be submitted online only at Kerala E-Tender Website `https://etenders.kerala.gov.in` using a valid Digital Signature Certificate.

Intending tenderers are advised to follow the "Instructions to Bidders for Online Bid Submission" provided in the annexure and visit `trestpark.org` and `https://etenders.kerala.gov.in` regularly for any corrigendum or amendment.

Sd/-
The Chief Executive Officer
Trivandrum Engineering Science & Technology (TrEST) Research Park
TC-4/2322, GEM Building , Opposite CET,
College of Engineering Trivandrum
Kerala State 695016
Phone: 0471- 2598555 / 9188933426
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Contents

1 Introduction

India, as one of the world's largest and fastest-growing economies, stands at a critical crossroad in its journey towards sustainable development, balancing economic growth and environmental responsibility. Electric Vehicles (EVs) emerge as a sustainable substitute for fossil fuels in the road transportation sector, resonating deeply with India's commitment to mitigating climate change through principles of sustainability, adaptability, efficiency, inclusivity, and synergy. Despite challenges, India aims for a 30% EV market share by 2030, with only 6.3% electric vehicles in 2023, necessitating concerted efforts from stakeholders. The Government of Kerala has declared a program to make the state 100% renewable energy-based by 2040 and carbon neutral by 2050, ahead of the national pledge for net-zero emissions by 2070. In line with this commitment, Kerala's government seeks to foster electric mobility development and indigenous manufacturing, anticipating a monumental transformation in the EV segment. Kerala's strategic focus on electric mobility was evident in its 2019 EV Policy, viewing the adoption of electric mobility as an opportunity to catalyze an EV manufacturing ecosystem within its borders. Kerala, a state known for its abundant natural resources and rich mineral deposits, has historically been a hub for industrial growth and economic development. With its diverse geography and extensive coastline, Kerala is uniquely positioned to support industries reliant on energy and minerals. The state's wealth of mineral resources, particularly Heavy Mineral Sands, has led to the establishment of major industries like Indian Rare Earths Limited, Kerala Minerals and Metals Limited, and Travancore Titanium Products. These companies not only extract and process vital minerals but also contribute significantly to Kerala's economy. Given Kerala's robust mineral production and established industrial base, the state is poised to enter a new era of technological advancement.

Bidders are hereby informed that this project involves Government support, technology transfer, and long-term operational commitments. Accordingly, the broad principles relating to the minimum operation period, royalty, exit conditions, asset ownership, intellectual property, and penalties are disclosed in this RFP for transparency and bidder understanding. However, the detailed commercial, legal, and operational terms, including exact financial values and mechanisms, shall be finalized and incorporated in the Agreement(s) to be executed with the Selected Bidder. Submission of a bid shall be deemed as acceptance of this framework.

2 Electric Vehicle (EV) Consortium

The EV Consortium, managed by the Kerala Development and Innovation Strategic Council (K-DISC), is a flagship initiative aimed at creating, strengthening, and expand-

ing the electric vehicle (EV) manufacturing ecosystem in Kerala. This pioneering program brings together the expertise and resources of key institutions including Travancore Titanium Products Ltd. (TTPL), Vikram Sarabhai Space Centre (VSSC), Centre for Development of Advanced Computing, Trivandrum (C-DACT), and the Trivandrum Engineering Science and Technology (TrEST) Research Park.

K-DISC anchors and coordinates this initiative, prioritizing innovation and local economic development. The consortium's mission is to transform Kerala into a hub for manufacturing EV subsystems and components, with a target of localizing the production of 60–70% of EV subsystems and components within the state in the coming years.

Key roles and contributions of the consortium partners are as follows:

- Travancore Titanium Products Ltd. (TTPL): A state-owned public sector enterprise, TTPL produces Lithium Titanate Oxide (LTO), a critical electrode material. TTPL supplies LTO to VSSC for further research and development of advanced battery cells.
- Vikram Sarabhai Space Centre (VSSC): VSSC focuses on material characterization and cell design using cathode materials such as Nickel Cobalt Aluminium (NCA), Nickel Manganese Cobalt (NMC), and Lithium Ferrous Phosphate (LFP). It leads the development and qualification of LTO-based cells.
- Centre for Development of Advanced Computing (C-DACT), Trivandrum: C-DAC develops power electronic components for batteries, including the Battery Management System (BMS) and Wide Band Gap (WBG) power electronic controllers for EV drive systems. These components are engineered to integrate with the LTO cells developed by VSSC.
- TrEST Research Park: TrEST contributes to the design and development of motors and controllers for EV applications. It also oversees the establishment of a Drive Train Laboratory (both high voltage and low voltage) to support the testing and validation of drive train systems.

Through this collaborative effort, the EV Consortium is laying the foundation for a robust and self-reliant EV manufacturing ecosystem in Kerala, fostering technological advancement, promoting sustainable mobility, and contributing to the state's economic development.

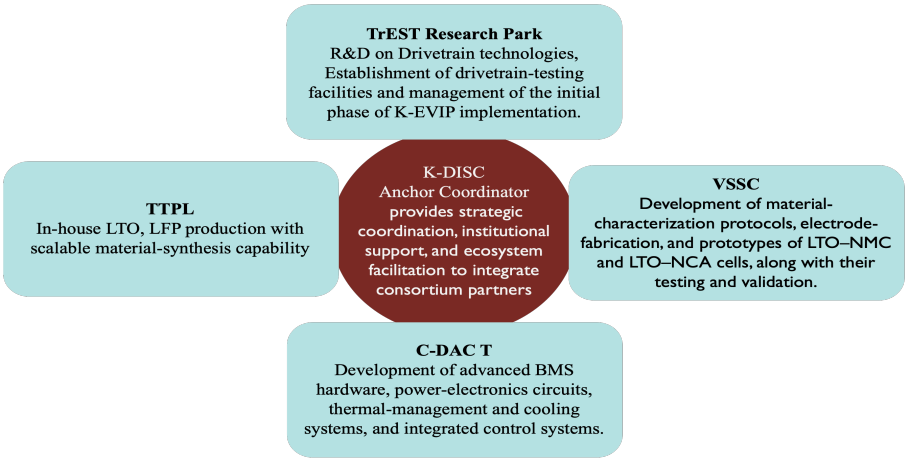

Figure 1: Roles of EV Consortium Partners

2.1 Kerala Development and Innovation Strategic Council (K-DISC

The Kerala Development and Innovation Strategic Council (K-DISC) is a strategic think tank and advisory body of the Government of Kerala, constituted as a society under the Travancore-Cochin Literary, Scientific and Charitable Societies Act of 1955. It plays a pivotal role in shaping and implementing innovative policies and programs that integrate cutting-edge technology and process innovations to accelerate the State's development. K-DISC focuses on addressing key societal challenges such as holistic healthcare, employment generation, social security, infrastructure, and food and nutrition security. It operates with a strong pro-poor bias and promotes gender justice and the inclusion of marginalized communities, all within the framework of existing fiscal constraints. In pursuit of these goals, K-DISC has initiated and supported a wide array of innovative projects, including:

- Young Innovators Program (YIP): Fostering creativity and innovation among students.
- Emerging Technologies Program (ETP): Promoting the development and adoption of advanced technologies like AI, blockchain, and IoT.
- One Local Government One Idea (OLOI): Encouraging grassroots innovation through local self-governments.
- One District One Idea (ODOI): Program is an MSME innovation cluster initiative aimed at promoting innovation for local economic development.
- Vijana Keralam providing employment for the educated youths through skilling.
- Electric Vehicle Consortium Program: Supporting indigenous development of elec-

tric vehicle technologies, including battery and cell manufacturing. Through these and other initiatives, K-DISC continues to position Kerala as a leader in innovation-led, inclusive, and sustainable development.

2.2 Trivandrum Engineering Science and Technology (TrEST) Research Park

Trivandrum Engineering Science and Technology (TrEST) Research Park is established to promote partnership and interaction between academic community and industry. The synergy is expected to benefit both and bring about qualitative and quantitative improvements. The model is seen as the vehicle for growth in the knowledge economy and has already been proved in Stanford Research Park in Silicon Valley, IIT Madras Research Park in Chennai, and many more in China and other countries. It is expected that TrEST Research Park will succeed in developing new technologies and foster inventions resulting in new technology companies coming up in the Park in various engineering disciplines. The vision of the Park is to eventually bring in all engineering and technology, academic and research institutions in Kerala into its fold. From the State's perspective, TrEST Park will help in generating high quality employment and help in economic development of the State. The Research Parks are non-profit making facility provided and attached to Universities and Institutions to provide facilities to industries to start research centres. These Research Parks will create an environment whereby industry can leverage the specialized expertise of the faculty of the technical institutions, utilize their research facilities, while providing part time employment and experience to students.

3 Request For Proposal (RFP)

The Trivandrum Engineering Science and Technology (TrEST) Research Park, as part of its mission to promote sustainable mobility and advanced manufacturing in the state, is inviting proposals through this Request for Proposal (RFP) from experienced manufacturing companies/startups engaged in the production of electric vehicle (EV) cells and batteries. This initiative is a strategic step toward establishing a robust domestic capability for producing advanced lithium-titanate oxide (LTO) based batteries and battery management systems (BMS) for EV applications.

The project aims to establish a pilot production facility within the premises of Travancore Titanium Products Ltd. (TTPL), leveraging advanced technologies developed by leading R&D institutions such as the Vikram Sarabhai Space Centre (VSSC) and the Centre for Development of Advanced Computing (C-DACT), under the EV Consortium managed by K-DISC. The facility will utilize battery-grade lithium titanate produced by TTPL

to set up an assembly line for the production and commercialization of LTO-NMC cells and batteries. The production line, based on cell designs developed by VSSC, will be implemented on a turnkey basis with the procurement of additional required materials.

This RFP also lays the groundwork for scaling up production at the upcoming Kerala EV Industrial Park in Thiruvananthapuram and for developing a comprehensive commercialization strategy to meet the growing market demand for high-quality, safe, and reliable EV batteries.

The selected company or startup will not only implement pilot production using the technologies and materials supplied by consortium partners but also establish a compliant and scalable manufacturing unit, assume full operational responsibility, and eventually deliver market-ready battery solutions including the different chemistries, cell and battery specifications in aligned with evolving industry requirements.

3.1 Objective

The key objectives of this RFP are:

- Establish a pilot manufacturing line for prismatic and cylindrical cells (LTO–NMC / Graphite-LFP / LTO–LFP), along with battery packs, with a daily production capacity of at least 250 prismatic cells and 250 cylindrical cells. The facility will operate in two shifts per day and will incorporate the necessary resource mobilization along with a comprehensive marketing strategy.
- Conduct real-world pilot testing of at least 50 LTO battery packs on electric two- and three-wheelers in collaboration with Original Equipment Manufacturers (OEMs).
- Develop a roadmap for scaling up production at the planned Kerala EV Industrial Park in Thiruvananthapuram and prepare a robust commercialization plan for the batteries, aligned with the pilot manufacturing line.

3.2 Scope of Work

3.2.1 Phase I: Facility Establishment & Pilot Production (Initial 12 Months)

Detailed Facility Design and Engineering:

- Assess the provided bare space (9,020 sq. ft.) at TTPL for structural integrity, utility access, and hazardous material handling.
- Develop a detailed architectural and engineering design, including layouts for a daily production capacity of 250 units per shift (cells of 2.1 V, 40 Ah capacity),

using two assembly lines (Cylindrical and Prismatic) for cell making, covering:

  - Raw material handling area in a dust-free environment.
  - Clean Room 1, ISO-8 standard (foreign particles in the coating process cannot be removed by cleaning methods), maintained at 22 ± 2 ℃, with semi-dry and dry areas for slurry mixing, transfer coating, drying and calendering, and vacuum drying.
  - Clean Room 2, ISO-7 standard, with dry and extra-dry areas (as water inside the cell leads to quality losses) for stacking, winding, packaging, electrolyte auto-filling, and laser sealing.
  - Cell finishing area in a normal environment, covering formation, High Temperature (HT) aging, Normal Temperature (NT) aging, End-of-Line (EOL) testing, and grading.
  - Product handling area in a dust-free environment, etc.

- Implement internal modifications (industrial flooring, ventilation, fire suppression, lighting).
- Ensure compliance with safety (AIS, BIS) and environmental regulations.

Infrastructure Development & Utility Installation:

- Install essential utilities: electrical, water supply, wastewater treatment, and compressed air systems.
- Assess and install transformers/generators (if needed) with TTPL consent.
- Set up data networking for real-time monitoring and process control.

Machinery & Equipment Procurement, Installation, and Commissioning:

- Procure or import all cell and battery manufacturing equipment required to produce 500 cells per day in two shifts, including prismatic and cylindrical cells of 40 Ah capacity, based on the LTO-NMC/Graphite-LFP/LTO-LFP chemistries.
- Include mixers, coating, calendering, slitting, notching, stacking machines, electrolyte fillers, formation chambers, testers, automation systems etc.
- Procure all essential tools, instruments, and testing equipment required for the production of LTO–NMC cells, with flexibility to accommodate three chemistries, in both prismatic and cylindrical formats.
- Manage delivery, installation, and commissioning.

Technology Acceptance Implementation & Integration:

- Formalize technology transfer agreements with K-DISC, VSSC, and C-DAC.
- Integrate VSSC's process docs and C-DAC's BMS and packaging designs.
- Ensure strict IP and confidentiality compliance.
- Machinery, manpower, and integration shall be undertaken based on an overall plan worked out jointly with K-DISC and TrEST Park. The current cell capacity is 40 Ah, but it can be tweaked by varying the electrode length.
- Suitably to meet the form factors of cells as requirement of OEM's identified by the bidder.
- The cells shall be assembled into a battery packs, which will be integrated with a BMS designed by C-DAC, and enclosed in a suitably designed casing. The enclosure and pack are designed for 48 V, 40 Ah, but can be tweaked to meet OEM requirements.
- The appropriate form factor to be determined by the bidder based on the use case applications.
- The selection of chemistry, including LFP, to be decided by the bidder following validation of the current use case application.

3.2.2 Phase II: Post-Pilot Expansion & Commercialization (Up to 3 Years)

Commercialization Strategy Development:

- Based on pilot validation results and market feedback, refine the product specifications and chemistries as per market requirements and company/startup capabilities.
- Develop and execute a comprehensive commercialization plan, including market entry strategies, pricing models, distribution channels, and marketing initiatives.
- Establish partnerships with OEMs, distributors, and research institutes to build a robust network for commercialization.
- Develop and implement effective after-sales and service support mechanisms, including regional distribution networks, focusing on both B2B and B2C sales.

Scaling Up of Manufacturing in Kerala EV Industrial Park:

- Generate a detailed plan for scaling up production at the upcoming Kerala EV Industrial Park (Thiruvananthapuram), outlining phased expansion, additional machinery requirements, and workforce planning including material moblisation and Marketing strategy.

- Undertake the establishment of a full-scale commercial production unit at the proposed Kerala EV Industrial Park, based on identified market potential.
- Ensure that the full-scale production aligns with Kerala EV Industrial Park objectives, including employment generation and sustainable manufacturing.

Obligation:

- Bear full responsibility for the production of cells and batteries with LTO–NMC, Graphite-LFP, and LTO–LFP chemistries, including all operations, stringent quality control, and successful scaling up, even after receiving initial technical support from the EV Consortium's technology providers.
- Manage necessary resource mobilization along with a comprehensive marketing strategy.
- Maintain compliance with all statutory clearances, regulatory permissions, and national/international battery standards throughout commercial operations.
- Fulfill all reporting obligations, providing periodic technical and commercial progress reports to the EV Consortium through TrEST Research Park & K-DISC.
- Commit to operating at the specified location for a minimum binding period of 10 years under this project.
- Manage financial aspects, ensuring contributions from private equity and venture capital funds, and adhering to the agreed-upon investment from the company/startup.
- The production line will also adopt LFP chemistries in the second stage using battery-grade LFP produced by TTPL, and will eventually incorporate LTO–LFP chemistries as well.

Table 1 presents the detailed technical requirements for the proposed pilot-scale cell production, including cell chemistries, production capacities, and manufacturing process types. Appendix I provides the manufacturing process of LTO batteries along with the relevant specifications. This Scope of Work ensures the selected company/startup delivers high-quality, market-ready LTO batteries and contributes to the establishment of a scalable and sustainable EV battery manufacturing ecosystem in Kerala.

3.2.3 Proposed Space Layout for Pilot Production Facility at TTPL

The plan of the proposed building at TTPL for pilot production is given in Figure 2 & 3. Two masonry buildings with a total area of 9,020 sq. ft. have been earmarked for the pilot run. The first building has two sections separated by a partition wall, with

Table 1: Proposed Technical Requirements for Pilot-Scale Cell Production

Sl. No.	**Technical Requirement**	**Details for Pilot Production**
1	Cell Chemistries	LTO–NMC, Graphite–LFP, LTO–LFP (or equivalent Li-ion chemistries)
2	Cell Formats	Prismatic and Cylindrical
3	Minimum Production Capacity	250 prismatic cells/day and 250 cylindrical cells/day
4	Production Scale	Pilot-scale manufacturing with scope for scale-up
5	Production Process Type	Semi-automated / automated processes (electrode preparation, cell assembly, formation, testing)
6	Operating Shifts	Two shifts per day
7	Quality Control	In-process and batch-level testing with traceability
8	Process Flexibility	Ability to handle multiple chemistries and formats
9	Battery Pack Assembly	Provision for assembling battery packs of at least 50 packs per day using pilot-produced cells
10	Resource & Market Readiness	Adequate resource mobilisation and a defined marketing strategy

one side measuring 3,918 sq. ft. and the other side 2,637 sq. ft. The second building has an area of 2,465 sq. ft. These facilities are structurally sound and provide adequate space to accommodate the pilot-scale manufacturing of LTO-based cells and battery units under the EV Consortium initiative. The architectural layouts include plinth area and cross-sectional views, ensuring clarity in spatial planning and suitability for equipment installation are shown in Figure 2 and 3.

The proposed space layout prepared by the bidder should facilitate a daily production capacity of 250 units per shift, assuming two assembly lines for cell making, while ensuring sufficient dedicated areas for the following operations: raw material handling in a dust-free environment; Clean Room 1, ISO-8 standard (as foreign particles in the coating process cannot be removed by cleaning methods), maintained at 22 ± 2 °C, with semi-dry and dry areas for slurry mixing, transfer coating, drying and calendering, and vacuum drying; Clean Room 2, ISO-7 standard, with dry and extra-dry areas (since water inside the cell leads to quality losses) for separation, stacking, winding, packaging, electrolyte auto-filling, and laser sealing; cell finishing in a normal environment covering formation, HT aging, NT aging, EOL testing, and grading; and product handling in a dust-free environment.

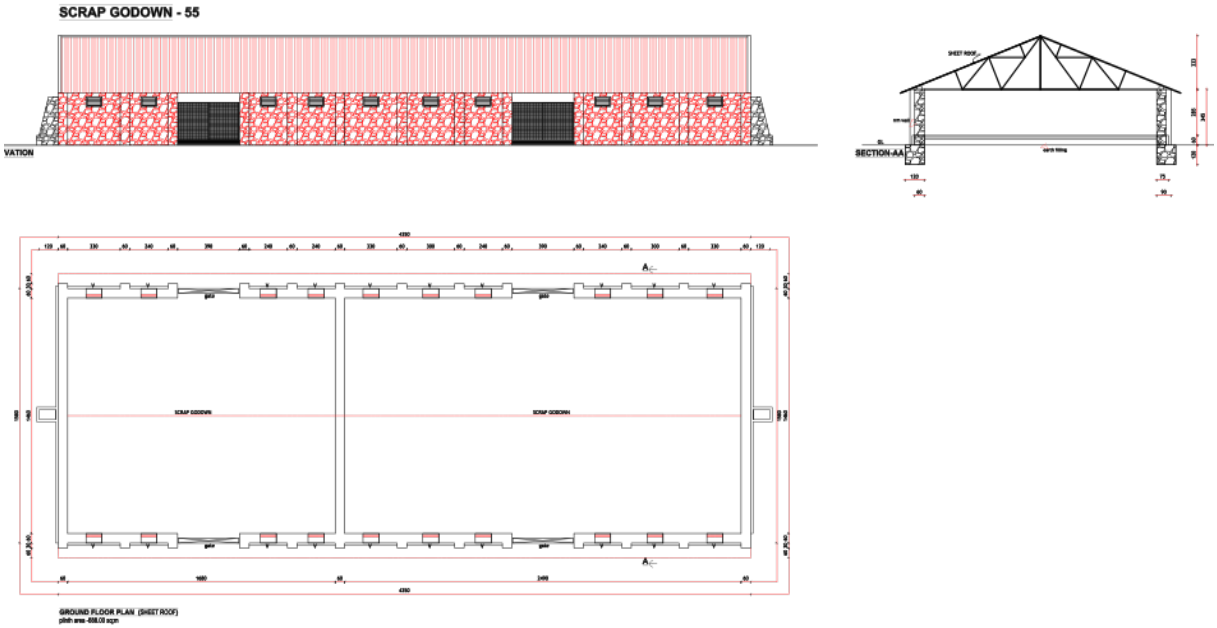

Figure 2: Proposed Space Layout for Pilot Production Facility at TTPL: Building 1

The pilot production facility established at TTPL shall continue to operate at the TTPL premises for the specified period. The pilot facility is intended for technology validation, skill development, and limited market deployment. Based on market demand and the successful performance of the pilot operations, the Selected Bidder may establish a separate, larger-scale commercial manufacturing facility at the Kerala EV Industrial Park by

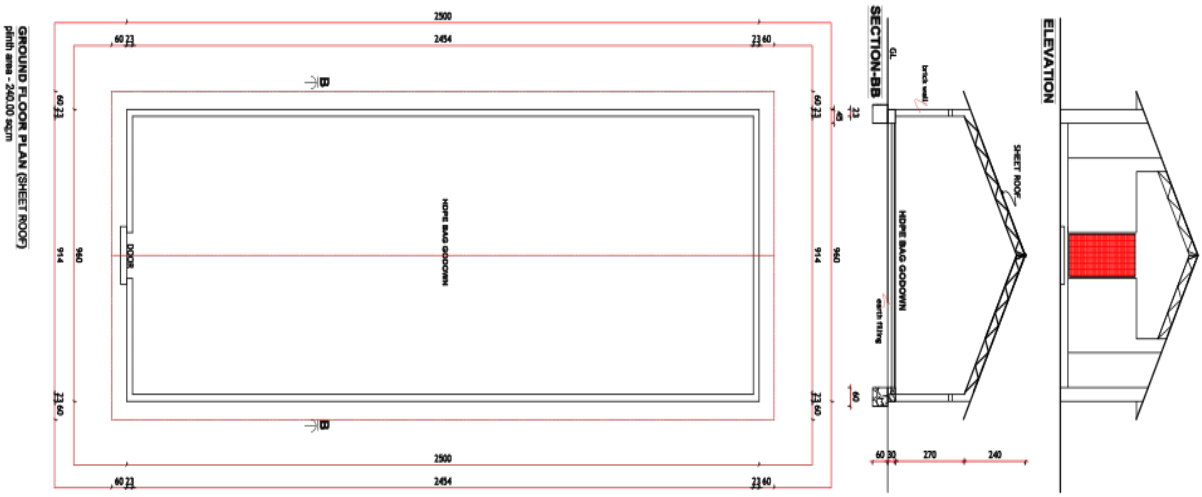

Figure 3: Proposed Space Layout for Pilot Production Facility at TTPL: Building 2

augmenting fresh infrastructure and equipment, without affecting the continuity of the pilot facility at TTPL.

3.2.4 Stakeholders Consultation

The company/startup can seek the expertise of other OEMs in the automotive sector, or organizations such as the Automotive Component Manufacturers Association of India, Society of Indian Automobile Manufacturers (SIAM), Confederation of Indian Industry (CII), Automotive Research Association of India (ARAI), The Energy and Resources Institute (TERI), EV industry associations, and industrial investors to ensure market requirements are met and to attract customers.

3.3 Nature and Status of this RFP

- This Request for Proposal (RFP) is issued solely for the purpose of soliciting proposals and evaluating eligible bidders for selection of a strategic partner.
- Except for provisions expressly stated to be binding, nothing contained in this RFP shall be construed as creating any contractual right or obligation on the part of TrEST Research Park, K-DISC, TTPL, or the Government of Kerala.
- The detailed rights, obligations, responsibilities, liabilities, penalties, royalty terms, exit conditions, asset ownership, and enforceability shall be governed exclusively by the Agreement(s) executed with the Selected Bidder.
- In the event of any inconsistency or conflict between the provisions of this RFP and the Agreement(s), the provisions of the Agreement(s) shall prevail.

4 Eligibility Criteria

4.1 General Eligibility

a) The Bidder shall be a legally registered entity incorporated under the applicable laws of India.

b) The Bidder must not have been blacklisted or debarred by any State Government, Central Government, PSU, Multilateral Institution, or Regulatory Authority.

c) Bidders shall submit a signed declaration of non-conflict of interest.

4.2 Technical Eligibility

a) The Bidder shall have a minimum of three (3) years' experience in the manufacturing of lithium-based battery cells or battery packs (LTO, LFP, NMC or similar chemistries).

b) The Bidder shall currently operate a functioning manufacturing facility with an annual installed capacity of at least:

- 0.50 MWh/year for cell manufacturing, OR
- 0.50 MWh/year for battery pack manufacturing.

c) The Bidder shall demonstrate technical capability in cell fabrication processes, including slurry preparation, coating, calendaring, assembly, formation, and ageing.

d) The Bidder must provide evidence of compliance with relevant BIS, AIS, ISO or equivalent international standards (Appendix 2).

e) The Bidder shall submit product datasheets, quality certificates, and test reports for previously manufactured cells or packs.

f) The Bidder shall demonstrate experience in at least one of the following:

- Pilot-scale cell line installation
- Commissioning of new battery manufacturing equipment
- Execution of technology transfer projects

4.3 Financial Eligibility

a) The Bidder shall have a minimum Net Worth of INR 5 Crore as per the last audited financial year.

b) The Bidder shall have a minimum average annual turnover of INR 20 Crore over the last three (3) financial years, from battery manufacturing or related advanced manufacturing sectors.

c) In the case of a Bidder classified as a Startup, the annual turnover requirement shall not apply. Instead, the Startup Bidder shall satisfy at least one of the following financial eligibility conditions:

   (a) Net Worth of not less than INR 3 Crore, duly certified by a Chartered Accountant; or

   (b) Equity investment and/or grant funding of not less than INR 5 Crore received from the Government of India/State Government or SEBI-registered funds.

d) The Bidder shall submit audited financial statements for the last three years.

e) The Bidder shall not be under insolvency, liquidation, or bankruptcy proceedings.

4.4 Consortium / Joint Venture Eligibility

a) Bidders may participate as a Consortium or Joint Venture with a maximum of three (3) members.

b) The Lead Member shall:

   – Meet at least 70% of the technical eligibility criteria,

   – Hold at least 51% participation in the Consortium/JV, and

   – Be responsible for project execution and contractual obligations.

c) A foreign technical partner may participate as a consortium member but must sign the NDA and Technology Compliance Undertaking.

d) Trading firms or intermediaries without manufacturing capability are not eligible

e) Clarify responsibility without exclusion: The Bidder shall identify the entity responsible for technology ownership and IP-related obligations. In the case of a consortium, such responsibility may be assigned to one or more members as agreed among themselves.

5 Funding Project Financing and Support

The project is required to adopt a structured financing model incorporating contributions from both public and private sources. A government contribution of up to 20% of the total project cost is proposed to catalyze initial deployment. The remaining funds will

be raised through equity financing from institutional investors and contributions from startup ecosystem, covering both capital and operational expenditures. TTPL will provide in-kind support through infrastructure and utilities, thereby reducing the capital burden and optimizing the overall cost structure. Accurate cost estimation is critical for the pilot production of LTO-based cells (LTO-NMC) at TTPL. This includes assessing costs for active materials, binders, electrolytes, casings, and essential processing equipment such as mixers, coaters, and formation units. Additional considerations include infrastructure, utilities, import duties, and labor expenses—essential for budgeting, feasibility analysis, and planning for future scale-up.

5.1 Financing Model

Funding Breakdown: The establishment of the pilot production facility at TTPL is supported by a well-structured funding model, combining contributions from government bodies, private investors, and strategic industry players to ensure financial sustainability and shared risk.

- Government Support: With a commitment to promoting innovation and sustainable technologies, the government, through Kerala Infrastructure Investment Fund Board (KIIFB), is contributing 20% of the total project cost.
- Private Sector Participation: A majority of the funding, 80% or more, can be sourced from private equity and venture capital funds, including the bidder's contribution. This reflects strong investor confidence in the project's potential to drive growth and innovation in the EV battery manufacturing industry.

5.2 Production Strategy

The infrastructure for pilot production and required machinery of rated capacity for producing 250 cells per shift is to be established at TTPL.

- Minimum Production Capacity/Shift:
  - Daily Production: 250 cells/shift (with 10% QC rejection).
  - Monthly Production: 6250 cells (25 operational days/month).
  - Annual Production: 150000 cells/two shifts.
  - For the pilot run and subsequent commercial production, both cylindrical and prismatic cells should be manufactured, based on market demand.
  - Validate product performance

- Format for the equipment specifications (should be provided as per Annexure 11) as given in the Table 2.

Table 2: Format for the equipment specifications

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
1				
2				

*The bidder shall attach the brochure of all equipment from the manufacturer.

5.3 Quality Assurance Benchmarks

The Bidder shall comply with minimum Quality Assurance requirements for the manufacture of cells and battery packs at the Pilot Production Facility. The cell performance shall meet minimum industry-accepted benchmarks for cycle life, State of Health retention, internal resistance, and capacity retention, as declared by the Bidder in the technical specification sheet and validated through testing in accordance with applicable standards. The energy density, nominal voltage, and cell matching shall conform to the specifications declared by the Bidder. All cells and battery packs produced shall comply with mandatory safety and performance standards including IEC 62619, UN 38.3, AIS 156 (Phase II) for battery safety, and any other applicable BIS or ISO standards relevant to electric vehicle applications. The production process shall maintain a minimum yield of 85% with a maximum rejection rate not exceeding 5%, and batch-wise testing data shall be generated and maintained for every production cycle. The Bidder shall establish and follow documented Standard Operating Procedures for all manufacturing and testing processes and shall ensure calibration of all critical equipment at least once every six months. Quality control test reports, including charge and discharge performance curves, shall be maintained for each production batch. Prior to commissioning and operation, the Pilot Production Facility shall successfully undergo Factory Acceptance Testing and Site Acceptance Testing in accordance with defined protocols. The Technology Owner may update or revise these benchmarks during the contract period, and the Bidder shall ensure continuous adherence. The bidder shall ensure the test the samples through NABL accredited laboratories and keep the certification.

5.4 Equipment Validation and Acceptance Testing

The Selected Bidder shall implement a comprehensive Equipment Validation Protocol to ensure that all equipment supplied, installed, and commissioned for the pilot production facility conforms to the specifications stated in the RFP.

Prior to dispatch, all critical equipment shall undergo Factory Acceptance Testing (FAT) at the manufacturers or supplier's premises. FAT shall verify compliance with technical specifications, capacity, functional performance, safety features, and documentation requirements. FAT reports shall be submitted to the Purchaser for review and approval before shipment.

After installation and integration at the TTPL site, Site Acceptance Testing (SAT) shall be conducted to confirm correct installation, operational performance, safety compliance, and interoperability with other systems. SAT shall be carried out under actual operating conditions and shall include trial runs, performance verification, and safety checks.

Successful completion of FAT and SAT, along with submission of test reports and rectification of any non-conformities, shall be a precondition for final commissioning and acceptance of the equipment.

* The Purchaser or its authorised representative shall have the right to witness FAT and SAT or review the test reports.

6 Support by EV Consortium

The following supports can be extended by the K-DISC through EV Consortium to the company/startup.

- Infrastructure Support:
  - A dedicated built-up space of approximately 9,020 sq. ft.
  - This space will be leased out on a monthly rent basis at a subsidized rate.
- Utility Support:
  - The existing transformer facility at TTPL may be utilized for securing the required electrical connection.
  - Electricity and water charges will be provided at government-approved rates.
- Capital Contribution by Government:
  - A capital grant of up to 20% of the total investment will be provided in a phased manner through KIIFB (Kerala Infrastructure Investment Fund Board)

based on the timeline.

- Material Support:
  - As a policy initiative of the Government of Kerala, electrode materials such as Lithium Titanate Oxide (LTO) and Lithium Ferro Phosphate (LFP) will be supplied by TTPL at concessional rates during the pilot period, lower than the prevailing market prices, subject to availability. All other materials required for the production of cells and battery packs shall be arranged under the responsibility of the bidder.
- Technical and Administrative Support:
  - The K-DISC through EV Consortium will extend assistance in project coordination, regulatory facilitation, and technical mentoring, subject to available resources, to ensure the seamless establishment and functioning of the pilot plant.

7 Responsibilities of the Company

The selected manufacturing company/startup is expected to fulfill the following responsibilities as part of the pilot production. The company must first ensure facility readiness by installing the necessary infrastructure and carrying out internal modifications in the allotted TTPL building to accommodate cell and battery production. With regard to power supply, if additional electrical capacity/startup is required beyond the existing transformer and backup facility, the company shall be responsible for procuring and installing a new transformer and generator with the consent of TTPL. The company must also obtain all statutory clearances and regulatory approvals necessary for operating the pilot production facility. In addition, the company/startup shall procure and install all required production equipment, tools, instruments, and testing machinery to enable battery pack production. This includes cells with chemistries such as LTO and LFP, in both prismatic and cylindrical form factors, with targeted cell specifications such as 40 Ah, 2.1 V, and battery pack configurations such as 40 Ah/48 V. The company/startup is also required to procure all necessary materials for continuous production, except LTO/LFP, which will be provided. Additionally, it must ensure the effective marketing of the produced cells and battery packs. If sufficient LTO/LFP is not available, the company/startup may, with the approval of TTPL and other EV Consortium members, source the material from the open market at competitive rates. Depending on market requirements, the establishment may produce battery packs of different specifications with suitable BMS integration. Finally, the company/startup is expected to maximize the use of locally supplied raw materials to promote the Make-in-Kerala initiative and contribute to

local economic development. In addition, any responsibilities not explicitly covered by the EV Consortium shall be managed by the company/startup to ensure uninterrupted production and avoid delays.

8 Technology Transfer Conditions

8.1 Ownership and IP Rights

- The Intellectual Property (IP) of the LTO-NMC cell chemistry and process developed by VSSC, as well as the Battery Management System (BMS), packaging systems, and control electronics developed by C-DAC, shall remain with the respective technology developers.
- Technologies transferred by the EV Consortium partners may be used by the selected company/startup for commercial production and shall not be transferred to any third party including reverse engineering.

8.2 Confidentiality Agreement

- A Confidentiality and Non-Disclosure Agreement (NDA) must be signed before any technology documents, design files, or process parameters are shared.

8.3 Technology Package Includes

- Process documentation for electrode preparation, cell assembly, and formation by VSSC.
- The complete Hardware architecture, embedded firmware, software interface, and comprehensive design schematics for the Battery Management System (BMS) designed and developed by C-DAC.
- Battery packaging design files, detailed mechanical drawings, and guidelines for thermal management and safety integration developed by C-DAC.

8.4 Royalty and License Fees

The licence to use VSSC/C-DACT technology is granted solely for:

1. Establishment and operation of the Pilot Production Facility at TTPL;
2. Production of LTO cells and battery packs for electric vehicle and energy storage applications

3. Undertaking field trials, improvement studies, pilot production and commercial production.

The license shall explicitly prohibit the following:

1. No sublicensing, transfer, or sharing of the technology or process documents to any third party without prior written approval from the technology owner.
2. No reverse engineering or modification of proprietary components that result in derivative IP without joint IP agreements.
3. No sale or export of the technology, process files, or proprietary material.

Technology Transfer and Royalty Terms

1. The Selected Bidder shall pay a one-time technology access fee and an annual royalty to the respective technology owners. The royalty shall be linked to either production volume or net sales revenue, as specified in the Agreement, subject to a defined ceiling.
2. Fee structure to be decided based on mutual agreement and valuation norms set by the respective institutions.
3. The agreement period is 8 years, after which the VSSC and C-DAC labels can be removed, and there will be no requirement to pay royalty.

Any breach shall invite revocation of license and penalties

8.5 Regulatory and Safety Compliance

- The manufacturer must comply with AIS standards, BIS certification, and any other national or international regulatory norms.
- All safety and environmental protocols specified by regulatory autorities must be strictly followed.

8.6 Performance Validation

As part of the pilot production phase, the selected Bidder shall undertake comprehensive validation and field trials to demonstrate the manufacturability, performance, safety, and reliability of the transferred technology under real-world operating conditions. These activities are intended to establish technical robustness, identify areas for process optimisation, and assess the readiness of the technology for future scale-up and wider deployment.

Accordingly, the Selected Bidder shall be responsible for the following:

- Conducting validation trials using the transferred technology as part of the pilot production programme.
- Producing and deploying a minimum number of units (not less than fifty (50) battery packs and/or cell-based systems) integrated with KAL E-Cart vehicles or equivalent application platforms, as approved by the Consortium.
- Evaluating manufacturability, operational performance, safety, reliability, and consistency of the cells, battery packs, and associated systems under actual operating conditions.
- Carrying out validation and field trials in accordance with agreed test protocols, operating conditions, and performance parameters finalised in consultation with the Consortium.
- Submitting monthly progress and performance reports to K-DISC through TrEST Research Park, including production data, test results, deviations observed, and corrective actions undertaken.
- Preparing and submitting a consolidated validation and performance report at the conclusion of the pilot production run to K-DISC through TrEST Research Park.
- Utilising the outcomes of validation and field trials for technology refinement, process optimisation, and assessment of readiness for scale-up and subsequent commercialisation.

8.7 Review Rights

- The license/agreement may be withdrawn if the terms and conditions outlined in the MoU between the company/startup and the EV Consortium are violated, or if quality benchmarks are not maintained.

8.8 Reporting Obligations

- Periodic technical and commercial progress reports must be submitted to the K-DISC through TrEST Research Park.

8.9 Mandatory Operation Period

The Selected Bidder shall strictly adhere to the timelines prescribed for the establishment, commissioning, and operationalization of the Pilot Production Facility. The Selected Bidder shall ensure continuous operation of the Pilot Production Facility for a minimum period of ten (10) years from the date of commencement of production, and continue with

the agreement constituted by the TTPL unless otherwise approved by TTPL in writing. The Premature exit, suspension, or non-operation shall attract penalties equivalent to:

- Uncovered portion of Government's 20% investment;
- 12 month's average royalty/revenue share;
- INR 2 Crore compensation for technology disclosure and opportunity loss.

In case of a Consortium or Joint Venture, all members shall be jointly and severally liable for performance of obligations under the Agreement, with the Lead Member bearing primary responsibility

8.10 Exit, Renewal, Assignment, and Post-Termination Conditions

The Contract may be terminated by the Purchaser at any time in the event of breach of any terms and conditions, failure to perform contractual obligations, non-achievement of milestones or deliverables, insolvency, liquidation, fraud, misrepresentation, or misconduct on the part of the Selected Bidder. The Purchaser may also terminate the Contract, in whole or in part, in public interest or for administrative reasons, by giving thirty (30) days' prior written notice, without assigning any reason. No bidder shall have any claim against the Purchaser arising out of such actions. The Selected Bidder may request termination of the Contract by giving sixty (60) days' prior written notice, stating valid reasons, subject to the prior written approval of the Purchaser. During the notice period, the Selected Bidder shall continue to perform its obligations without disruption and shall ensure an orderly handover of all ongoing activities to the Purchaser or to any agency nominated by the Purchaser. Upon completion of the Contract period, the Purchaser may, at its sole discretion, extend or renew the Contract on the same or revised terms and conditions, based on performance, continued requirement, and compliance with contractual obligations. No right of renewal shall accrue to the Selected Bidder. The Selected Bidder shall not assign, novate, transfer, or subcontract the Contract or any part thereof without the prior written approval of the Purchaser. Any unauthorized assignment or transfer shall be treated as a material breach and shall render the Contract liable to termination, without prejudice to other remedies available to the Purchaser. Upon termination or expiry of the Contract, the Selected Bidder shall hand over to the Purchaser all project documents, data, and intellectual property required for continuity of the project. Assets and equipment procured substantially using funds of the Selected Bidder shall remain with the Selected Bidder. The Selected Bidder shall ensure a smooth handover of ongoing activities to the Purchaser or to any agency nominated by the Purchaser, without service disruption. All confidential information shall be returned

or destroyed as instructed, a final closure report shall be submitted, and all undisputed dues up to the date of termination shall be settled. Where required, the Selected Bidder shall provide reasonable technical support for a period of up to thirty (30) days to ensure continuity.

8.11 Environmental Compliance and Waste Management Obligations

The Selected Bidder shall comply with all applicable Central, State, and Local environmental laws, rules, and regulations throughout the establishment, commissioning, pilot production, and operation of the Pilot Production Facility. The Selected Bidder shall obtain and maintain all mandatory environmental clearances, approvals, and consents, including Consent to Establish (CTE) and Consent to Operate (CTO), from the competent authorities, and shall comply with all conditions stipulated therein. All hazardous waste, battery waste, e-waste, and process residues generated shall be managed in accordance with the Environment (Protection) Act, 1986, the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, the Battery Waste Management Rules, 2022 (as amended), and applicable CPCB/SPCB guidelines. Waste shall be segregated, stored, transported, recycled, or disposed of only through CPCB/SPCB-authorized recyclers or Treatment, Storage, and Disposal Facilities (TSDFs). On-site disposal shall not be permitted unless specifically approved by the State Pollution Control Board. Where applicable, the Selected Bidder shall comply with Extended Producer Responsibility (EPR) obligations, including registration, record maintenance, and submission of prescribed returns. The Selected Bidder shall maintain records of environmental compliance and submit periodic compliance reports to the Purchaser. The Purchaser reserves the right to conduct inspections or environmental audits at any stage. Any non-compliance with this clause shall be treated as a material breach of contract and may result in penalties, suspension of payments, or termination of the contract, without prejudice to rights available under law. Where the manufacturing process involves the storage, handling, or use of flammable, explosive, or hazardous materials beyond the prescribed limits, the Selected Bidder shall obtain and maintain all required licences, approvals, and clearances under the Explosives Act and applicable rules from the competent authority, prior to commencement of operations and throughout the contract period.

8.12 Audit Rights and Reporting Requirements

The Purchaser shall have the right to conduct audits of the Selected Bidder at any time during the contract period and for three (3) years after contract closure. Such audits may include, but are not limited to:

- Financial audits
- Technical and operational audits
- Environmental and safety compliance audits
- Inventory, production, and quality-control audits

The Selected Bidder shall provide full access to:

- All project-related documents, books of accounts, logs, reports, and digital records
- Facilities, equipment, production units, laboratories, storage areas, and operational sites Access must be provided within five (5) working days of receiving the audit notice.

The Selected Bidder shall submit mandatory reports as follows:

- Monthly Progress Report on construction, installation, commissioning, and operational status
- Quarterly Compliance Report covering KPIs, safety standards, environmental compliance, and waste management
- Annual Performance Report detailing production volumes, utilization, quality benchmarks, training activities, and financial performance All reports must be submitted in the format prescribed by the Purchaser.

The Selected Bidder must maintain all project-related records for a minimum period of seven (7) years from the date of record creation and ensure accessibility for audits. The Bidder shall address audit observations through a Corrective Action Plan (CAP) within 30 days of receiving the audit report. Failure to comply may lead to:

- Penalties
- Suspension of milestone payments
- Contract termination in case of repeated non-compliance
- If any audit identifies major non-compliance, fraud, or material deviation, the cost of such audit shall be borne by the Selected Bidder.

9 Proposed Timeline & Govt. Funding: Payment Terms and Conditions

9.1 Proposed Timeline

The proposed timeline of activities following the award to the OEM for pilot production is outlined in Table 3.

Table 3: Proposed Timeline

Sl. No.	Activity	Start Date	End Date
1	RFP - Award to bidder for pilot production facility at TTPL	02/03/2026	–
2	Engagement meeting with Kerala Automobiles Ltd. (KAL) & KELTRON	02/03/2026	15/03/2026
3	Building refurbishment for Cylindrical/Prismatic Cell production:	01/03/2026	30/06/2026
4	Procurement and installation of machineries	01/04/2026	31/08/2026
5	LTO material supply from TTPL to OEM	15/06/2026	–
6	Production of first batch cells for BMS testing	01/09/2026	30/09/2026
7	Production of BMS systems by KELTRON	01/09/2026	–
8	Production of cells and batteries for field trial testing using 10 Mini e-Cart	01/09/2026	–
9	Start of pilot production at TTPL (40 Ah, 48 V, LTO-NMC/LTO-LFP/ Cylindrical/Prismatic Cells and Batteries)	01/09/2026	–
10	Continue the production and marketing of cells and batteries	01/10/2026	–

9.2 Govt. Funding: Payment Terms and Conditions

The financial contribution for establishing the Pilot Production Facility shall follow a 20–80 cost-sharing model, defined as follows:

- Government Share (20%)
  - The Government support (KIIFB through SPV) under this project shall be in the nature of a Capital Support Grant, non-equity and non-ownership, limited to a maximum of twenty percent (20%) of the approved project cost,

subject to achievement of milestones and compliance with the terms of the Agreement. Such support shall not confer any equity interest, management rights, or ownership over the Selected Bidder's business, assets, or intellectual property, unless explicitly provided in the Agreement.

- Bidder/Manufacturer Share (80%)
  - The selected Bidder/Manufacturer shall contribute a minimum of 80% of the total project cost, including expenses related to technology acquisition, equipment procurement, installation, commissioning, manpower, working capital, and other operational costs needed to establish and run the pilot facility.
  - Ownership of assets shall remain proportionate to funding, unless otherwise agreed in the final Agreement.

The government contribution will be disbursed to the selected company based on the milestones completed, as per the given table.

Milestone	Required Documents	Payment
Milestone 1: **Civil Work Completion**	• Submission of a report confirming completion of all civil works and establishment of utilities • Civil works completion certificate • Utility readiness certificate (power, HVAC, compressed air, ESD, water, safety systems) • Factory layout compliance report	25%
Milestone 2: Installation and Pilot Operation	• Delivery and installation reports for all machinery • OEM compliance certificates • Factory Acceptance Test (FAT) records (where applicable) • Calibration certificates for critical instruments • Trial production startup report (electrode making, cell assembly, formation, testing)	55%
Milestone 3: **Field Trials**	• Field-trial performance report (cycle testing, safety testing, thermal data, load tests) • Quality certification/validation from an accredited lab (if applicable) • Field Test: User/partner feedback report from field deployment	20%

- Funds released in tranches based on milestones
- Monitoring performance to evaluate the set targets and their achievement.

9.3 Dispute Resolution Mechanism

In the event of any dispute, difference, or claim arising out of or in connection with this Request for Proposal (RFP), the selection process, or the agreement(s) executed

pursuant thereto, the Parties shall first endeavor to resolve the same amicably through mutual discussions and good-faith negotiations. Failing settlement, the dispute shall be resolved through civil proceedings before the courts at Thiruvananthapuram.

10 Tender Process

The Trivandrum Engineering Science and Technology (TrEST) Research Park is inviting proposals through a Request for Proposal (RFP) for the selection of manufacturing companies/startups with relevant experience in the production of electric vehicle (EV) cells and batteries. The objective is to carry out the pilot production of LTO battery packs for electric vehicles at Travancore Titanium Products Ltd. (TTPL).

The RFP is issued in a two-cover system format via the e-procurement portal of the Government of Kerala (www.etenders.kerala.gov.in). Eligible and competent manufacturing companies/startups that meet the specified eligibility criteria are invited to participate.

Details of the RFP timeline are available in the "Critical Dates" section of the RFP document published on the e-tenders portal.

The two-cover system includes:

- Cover 1 – Pre-Qualification cum Technical Bid
- Cover 2 – Financial Bid

10.1 Pre-Qualification cum Technical bid

The bidder shall pay the following fees:

- A non-refundable fee of Rs. 25,000/- + GST towards the cost of bid documents/bid processing.
- An amount of Rs. 80,00,000/- as Earnest Money Deposit (EMD). The EMD of all unsuccessful bidders will be refunded within 30 days of finalization of the selection process/agreement.
- Online Payment Modes: The fees shall be paid through the e-payment facility provided by the e-procurement system.

The proposal shall contain the following documents which every bidder has to upload:

- Cover 1 shall contain, Part-I (this document in PDF form)/scanned copies of:
    1. Covering Letter (Annexure 1)
    2. RFP documents downloaded (signed with office seal)

3. Copy of the Registration Certificate of the bidder firm
4. Copy of GST Certificate
5. Copy of PAN, TAN and CIN
6. Undertaking of the agency in the prescribed format (Annexure 2) on Govt. of Kerala stamp paper worth Rs.200/-
7. Power of Attorney for the authorized signatory to sign the documents on behalf of the companies/startups (Annexure 3)
8. Declaration by the Bidder (Annexure 4)
9. Undertaking for No Blacklisting & No Banning (Annexure 5)
10. Certificate of Financial Information (Annexure 6)
11. Certificate of Prior Funding Received (Annexure 7)
12. Curriculum of Proposed Resources (Key Personnel) (Annexure 8)
13. Template for RFP Proposal (Annexure 9)
14. Detailed Project Report (Annexure 10)
15. Equipment Specification Submission Format (Annexure 11)

10.2 Financial bid

Project funding breakup as per Section 5.1 of the RFP. (An undertaking from each investor shall be submitted on Government of Kerala stamp paper worth Rs. 200/-, along with the details of the investor and their respective contributions.)

11 Bid Qualification Process

The bid qualification processes are listed below:

11.1 Pre-qualification process

1. The Bidder's Pre-Qualification Proposal will be evaluated as per the requirements specified in the document and adopting the pre-qualification criteria spelled out. The Bidder is required to submit all required documentation in support of the pre-qualification criteria.
2. The Bidder shall meet all the mandatory compliance requirements. Failure in meeting the mandatory compliance requirements will result in disqualification of the

Bidder.

11.2 Pre-Qualification Criteria (Cover 1- Pre-Qualification cum Technical bid)

The bidder should submit all the documents listed in Section 10.1, following the criteria provided in Table 4.

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Table 4: Comparison of Parameters for Companies and Startups

Sl. No.	**Parameter**	**Type of Companies**	**Startups**	**Documents Required**
1	Legal Status	Registered in India under the Companies Act: • Public Sector Undertaking (PSU) • Private Limited Companies	Registered in startup India: • Limited Liability Partnerships (LLPs) • Partnership firm • Private Limited Companies	• Copy of Registration/ Incorporation Certificate issued by Govt. OR • Copy of deed of partnership along with registration certificate issued by Govt. OR • Copy of DPIIT Startup Recognition Certificate
2	Annual Turnover / Financial Capability	Minimum average annual turnover of 20 Crore over the last three (3) financial years	Turnover not applicable. Must satisfy any one of the following: • Net Worth $\geq$ 3 Crore (CA certified), OR • Equity / Grant funding $\geq$ 5 Crore from Govt. / SEBI-registered funds	• Audited financial statements (last 3 years) and certificate as per Annexure 6 OR • Funding sanction letter / share subscription agreement
3	Corporate Identification Number (CIN)	Required	Not Required	Copy of CIN
4	GST Registration	Required	Required	Copy of GST Registration Certificate
5	PAN Number	Required	Required	Copy of PAN Card

11.3 Technical Qualification Process

The bidder's technical proposal will be evaluated in accordance with the requirements specified, using the technical evaluation framework outlined in this document. The proposals will be assessed by an evaluation committee appointed by the Chief Executive Officer, TrEST Research Park, or by the Government for this purpose. Bids that are not substantially responsive may be disqualified at the discretion of TrEST Research Park.

11.3.1 Technical Evaluation Criteria

Only those bidders who obtain an aggregate technical score of 60% or above will qualify for the financial evaluation stage. Failure to secure the minimum qualifying marks shall result in the rejection of the bid and the bidder. The total score for the technical evaluation is 100 marks. The criteria for technical evaluation of bids shall be based on the following:

a) Applicant's Experience and Credentials (90 marks)

b) Key Personnel (10 marks)

A technical presentation* will be conducted before finalizing the technical bid evaluation. In this presentation, bidders may showcase their specific technical expertise in LIB technology, including case studies and details of the proposed project activities planned.

∗Power Point Presentation (Maximum 40 slides, 45 minutes presentation and 15 minutes discussion)

The technical evaluation of bids is detailed as below:

a) Applicant's Experience and Credentials (90 marks)

The scoring criteria to be used for the evaluation of the applicant's experience and credentials shall be as follows:

Sl. No	Criteria	Score	Proof to be submitted
1	**Patents & Publications (10 Marks)** • Patents and publications as proof of the company's experience in LIB technology, and of the expertise of prominent scientific and engineering personnel.	• 0 - 10 Marks	• Attach copys of patents/papers
2	**Established production facility (10 Marks)** • An established production facility covering the entire production line for cells and battery packs with BMS, with a minimum production capacity of 100 cells per day.	• 0 - 10 Marks	• Factory layout and flow diagrams. • Compliance certificates (ISO, etc.). • Equipment/process documentation. • QA procedures and test results. • List of employees with qualifications. • Work orders/Engagement letters/-contracts.
3	**Non-Disclosure Agreement (10 Marks)** • Non-Disclosure Agreement (NDA) signed with prospective companies for the use of LIB technology in EVs, renewable energy, and other applications.	• 0 - 10 Marks	• Attach copies of agreements.

4	**Proof of Experiences (POE's)(10 Marks)** • POEs for initiated, completed, or established LIB integration with OEM production facilities for EVs, renewable energy, and other applications.	• 0 - 10 Marks	Attach copies of • Completion certificates from previous projects • Work orders or contracts • Client testimonials or performance letters • Project reports or deliverables
5	**Production Contracts (10 Marks)** • Production contracts for LIB supply to OEMs for EVs, renewable energy, and other applications.	• 0 - 10 Marks	• Agreement constituted • Client testimonials or performance letters • Project reports or deliverables
6	**Action Plan (20 Marks)**	• 0 - 20 Marks	• Include in the Annexure 10.
7	**Busines Plan (20 Marks)**	• 0 - 20 Marks	• Include in the Annexure 10.
Total		**90 Marks**	

b) Key Personnels (10 marks)

Sl. No.	Role of Resource	Score	Qualification	Proof to be Submitted
1	**Battery Technology Expert** - Fulltime Leads the technical aspects of battery development and ensures alignment with project goals.	3 Marks	PhD or Master's Degree in materials science, electrical engineering, or relevant fields.	Proof of appointments, credential as per Annexure 8.

2	**Process Engineer** - Full-time Designs and optimizes manufacturing processes for efficient battery production.	2 Marks	Master's or Bachelor's degree in Mechanical Engineering, Chemical Engineering, or Process Engineering.	Proof of appointments, credential as per Annexure 8.
3	**Quality Assurance Specialist** - Fulltime Ensures that the manufacturing process meets quality standards and complies with regulations.	2 Marks	Bachelor's degree in quality management, industrial engineering, or a related field.	Proof of appointments, credential as per Annexure 8.
4	**Materials Scientist** - Full-time Develops and tests battery materials, ensuring optimal performance.	2 Marks	Master's or Bachelor's degree in materials science, chemistry, or relevant field.	Proof of appointments, credential as per Annexure 8.
5	**Electrical Engineer** - Fulltime Responsible for designing and validating the electrical systems of battery modules and packs.	1 Marks	Bachelor's degree in electrical engineering.	Proof of appointments, credential as per Annexure 8.
Total			**10 Marks**	

11.4 Financial qualification

The financial proposals of only those bidders who qualify in the technical evaluation stage will be opened. The evaluation will focus on the competitiveness, reasonableness, and sustainability of the quoted prices.

The maximum marks allocated for the financial evaluation are 50. The final ranking of the bidders will be determined based on the total marks obtained in both the technical and financial evaluations, in accordance with the QCBS methodology explained in section 12.1.

11.4.1 Financial Evaluation Criteria

The financial evaluation of project proposals, carrying a total of 50 marks, will focus on three key parameters: annual production capacity, investment commitment, and scale-up prospects. The projected annual cell and battery production capacity (in MWh) will be

considered a vital measure of financial feasibility and commercial potential, with higher capacities earning higher scores. Investment commitment, expressed as a percentage of the total project cost, will also be a major factor, as government support is capped at 20%; therefore, bidders committing 80% or more through private equity, venture capital, or other funding sources will be awarded higher marks, reflecting stronger financial strength and risk-sharing. In addition, proposals will be evaluated on their scale-up prospects after five years, with emphasis on clear strategies for expanding production capacity, adopting advanced technologies, and penetrating wider markets. The following table outlines the distribution of marks awarded to each value creation component and investment commitment, along with the consideration of future prospects.

Sl. No.	**Criteria**	**Marks**
1	Annual production capacity from the project (in MWh)	0 – 17.5 Marks
2	Investment commitment in % of total project cost ($\geq$ 80%)	8 – 17.5 Marks
3	Scaleup prospects after 10 years based on the initial production capacity	0 - 15 Marks
Total		**50 Marks**

Note: The financial bids of only the technically qualified bidders will be opened on the specified date and time. These bids will be checked to see if they are substantially responsive. Bids that are not responsive or do not meet the conditions may be rejected at TrEST Research Park's discretion.

12 Scrutiny of Bids

An expert committee constituted by TrEST Research Park will review and evaluate proposals in three stages.

Stage 1 & Stage 2 – Pre-Qualification cum Technical Bid

1. A checklist with proper page-wise indexing of all supporting documents must be provided.
2. Each pre-qualification condition mentioned in **Section 10** is **mandatory**. Failure to meet any one condition will result in disqualification.
3. Technical bids of shortlisted bidders will be reviewed to determine whether they are substantially responsive. Non-responsive bids may be disqualified at the discretion of TrEST Research Park.

4. The bidder's technical solutions will be evaluated as per the requirements in this RFP and the technical evaluation framework in **Section 11**.
5. If the number of eligible bidders is deemed low, TrEST Research Park may extend, cancel, or reissue the invitation to bid.
6. Eligible applicants may be required to make presentations before a selection committee on their technical proposals.
7. Each technical bid will be assigned a score out of **100 marks**. Bidders scoring **60% or more** will qualify for the financial evaluation stage. Failure to achieve the minimum score will result in rejection of the technical bid.

Stage 3 – Financial Bid

1. The bidder shall provide the financial model as specified in **Section 11.4**. Financial evaluation will carry **50 marks**, based on the value creation, prospects of future addition and investment value submitted.
2. The bid should include all applicable taxes, duties, fees, levies, works contract tax, and other relevant charges.

General Conditions for Evaluation

- All proposals will be evaluated strictly in accordance with the criteria and requirements in this RFP.
- The decision of TrEST Research Park in the evaluation process will be final. No correspondence will be entertained outside the prescribed process.

12.1 Quality cum Cost Based System (QCBS)

The evaluation criteria proposed to be adopted for accepting the tender will be Quality cum Cost Based System (QCBS). The Technical bid Score (TS) will get a weightage of 75% and the Financial Bid Score (FS) a weightage of 25%.

12.1.1 Technical Bid Score Calculation Through QCBS:

- The bidder would be technically evaluated out of 100 marks. All the bidders who secure overall minimum of 60% (60 Marks out of 100 across all the components together) will be considered as technically qualified.

$$\text{Normalized Technical Bid Score (NTB)} = \frac{\text{Marks obtained in Technical Bid}}{\text{The highest marks of Technical Bid}} \times 100 \tag{1}$$

12.1.2 Financial Bid Score

- The financial bids will be evaluated based on the action plan and business plan submitted by the bidder. The score will be calculated from the marks obtained for the value creation, prospects of future addition and investment value.

$$\text{Normalized Financial Bid Score (NFB)} = \frac{\text{Marks obtained in Financial Bid}}{\text{The highest marks of Financial Bid}} \times 100 \tag{2}$$

12.1.3 Combined Evaluation bid Score (CES)

Finally, the weighted sum of normalized technical and financial scores, and bid with highest Final Score is the best bidder.

Combined Evaluation Score

$$\text{Combined Evaluation Score (CES)} = 0.75 \times \text{NTB} + 0.25 \times \text{NFB}$$

where, the Weightage of Technical Bid Score = 75%, and Weightage (WF) of Financial Bid Score = 25%

Example: given data for the bidders

Assumptions used in examples:

- Technical score awarded out of 120 marks. Minimum qualifying technical score = 60% of 120 = 72 marks.
- Financial score in these examples is shown on a 40-mark scale.
- Normalization uses the highest marks obtained among bidders as denominator (as per RFP).
- Weightage: Technical = 75%, Financial = 25%.

Combined Evaluation Score (CES)

Bidder	Tech (120)	NTB	Fin (40)	NFB	CES
A	95	100.00	30	85.71	96.43
B	88	92.63	35	100.00	94.47
C	76	80.00	28	80.00	80.00

Qualification and ranking:

- Technical qualification threshold = 72 marks. All three bidders (A:95, B:88, C:76) meet the technical threshold and proceed to financial evaluation.

- Final ranking by CES (higher is better): 1) Bidder A (96.43), 2) Bidder B (94.47), 3) Bidder C (80.00).

∗ Values are arbitrary and only for demonstration purpose.

In the event of a tie (two or more bidders attaining the same final score), the following rule shall apply in their order of preference for ranking:

1. The bidder with the highest Weighted Technical Score [S_T (Technical Score) $\times W_T$ (Weightage for Technical Score)] gets the higher ranking.
   "If tied even after"
2. The bidder with the highest Weighted Financial Score [S_F (Financial Score) $\times W_F$ (Weightage for Financial Score)] gets the higher ranking.
   "If tied even after"
3. The bidders will be considered as equally qualified and shall be called upon for another round of negotiations. The winning bid will be chosen based on mutually agreed terms thereafter. If no agreement is reached, the tender will be re-tendered.

1. TrEST Research Park is not bound to accept the best evaluated bid or any bid and reserves the right to accept any bid, wholly or in part.
2. In the event that the highest-ranked applicant fails to deliver as promised or is deemed to be ineligible due to legal, financial, or personal factors coming to notice or arising after the award of the consultancy, the next ranked applicant will be invited to take up the assignment at the price quoted by the L1 bidder or at the rate quoted by them after negotiations.

12.1.4 Additional Evaluation Provisions

1. **Site Visit / Facility Verification**: TrEST SPV reserves the right to conduct a physical or virtual visit of the Bidder's existing manufacturing facility.
2. **Sample Demonstration**: The Bidder may be required to submit sample LTO or published specifications.
3. **Performance Security**: The Selected Bidder shall furnish a Performance Security of 5% of the Project Cost, valid for the entire period of 10 years of mandatory operation.
4. **Conflict of Interest**: Bidders must disclose any conflict with Government entities, VSSC, C-DACT, TTPL, or TrEST.

12.1.5 Special Conditions

- Each bidder should submit only one (1) bid. Any bidder who submits/participates in more than one bid for the work shall be disqualified.
- If the due date for opening the RFP happens to be declared holiday, then the RFP will be received and opened on the very next day, for which no prior intimation will be given.
- During the RFP evaluation, TrEST Research Park may seek more clarifications/details from any or all of the bidders, if felt necessary.
- The ownership of all documents, reports, projects etc. being created as part of the assignment will vest with TrEST Research Park.
- This offer is valid for 120 days from the date of opening of the technical bid.
- The Security Deposit shall be liable for forfeiture in the event of any breach of the terms and conditions of the Agreement, non-fulfilment of contractual obligations, withdrawal from the bid after acceptance, or failure to execute the contract within the stipulated period.
- All annexes submitted as part of the bid shall be duly attested by a Notary.
- Any information furnished by the bidder, if found to be incorrect at any stage, would render them being declared as ineligible.
- Incomplete proposals may be summarily rejected. TrEST Research Park reserves the right to reject any or all the bid without assigning any reason thereof.

13 Instructions

Language: All correspondences and documents related to the RFP response shall be in english language only. The participating firm shall abide by the terms & conditions, as applicable, of the RFP. All pages of the RFP shall be duly signed by the authorized signatory. Multiple proposals from the same participating firm should not be submitted.

TrEST Research Park at their discretion shall inspect the participating firm works/office/reference site premises for the purpose of evaluation, as deemed necessary before selection of partner. TrEST Research Park decision in this regard shall be final.

Any participating firm which has been debarred/blacklisted by Central/State Governments or by any entity controlled by Central/State Governments from participating in any of their project, as on date of submission of RFP, shall not be eligible to submit the RFP.

13.1 Confidentiality and Disclaimer

1. From the time the proposals are opened to the time the contract is awarded, the agency(ies) should not contact any of the officials of TrEST Research Park on any matter related to its technical proposal. Information relating to the evaluation of proposals and award recommendations shall not be disclosed to the agency(ies) who submitted the proposals or to any other party not officially concerned with the process, until the publication of the contract award information.

2. Any attempt by the agency(ies) or anyone on behalf of the bidders to improperly influence TrEST Research Park in the evaluation of the proposals or contract award decisions may result in the rejection of its proposal and may be subject to the application of prevailing government sanctions procedures.

3. Notwithstanding the above provisions, from the time of the proposal's opening to the time of contract award publication, if any agency(ies) intends to contact TrEST Research Park on any matter related to the selection process, it should do so only in writing.

4. The bids should be submitted only through the portal `www.etenders.kerala.gov.in`. Agency(ies) shall upload all the necessary documents in the portal before the last date & time for online submission. Proposals received after the submission deadline will be treated as non-responsive and will be excluded from further evaluation process.

5. Proposals must be direct, concise, and complete. TrEST Research Park will evaluate the bidder's proposal based on its clarity and the directness of its response to the requirements of the project as outlined in this RFP document. Bidders shall furnish the required information on their technical and financial proposals in the enclosed formats only. Any deviations in format or if the proper information is not provided properly, the RFP will be liable for rejection. The evaluation committee may seek clarification, if required, while evaluating the proposal.

6. The technical bid opening date, time, and the address are as stated in the RFP document.

13.2 Force Majeur

Neither Party shall be liable for failure or delay in performance due to Force Majeure events, including acts of God, natural disasters, war, epidemic, government restrictions, or changes in law. The affected Party shall notify the other Party promptly, and timelines shall stand extended to the extent of such Force Majeure.

13.3 Amendment of RFP Documents

At any time prior to the deadline for submission of the RFP, TrEST Research Park may for any reason, modify the RFP document. The amendment document/ corrigendum shall be notified through the website www.etenders.kerala.gov.in and such amendments shall be binding on all the bidders.

13.4 Right to Accept or Reject Any or All Applications

- Notwithstanding anything contained in this RFP, TrEST Research Park reserves the right to accept or reject any application and to annul the RFP process and reject all applications, at any time without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons, thereof. In the event that TrEST Research Park rejects or annuls all the applications, it may at its discretion, invite all eligible participating firms to submit fresh applications.
- TrEST Research Park reserves the right to disqualify any applicant during or after completion of RFP process, if it is found there was a material misrepresentation by any such applicant or the applicant fails to provide within the specified time, supplemental information sought by TrEST Research Park.
- TrEST Research Park reserves the right to verify all statements, information and documents submitted by the applicant in response to the RFP. Any such verification or lack of such verification by TrEST Research Park shall not relieve the applicant of his obligations or liabilities hereunder nor will it affect any rights of TrEST Research Park.

13.5 Governing Laws & Jurisdiction

The RFP process shall be governed by, and construed in accordance with, the laws of India and the Courts at Thiruvananthapuram (India) shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the RFP process.

13.6 Failure to Agree with the Terms & Conditions/Contract

Failure of the Bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award of contract. The contract may be awarded to the next most responsive bid among other bidders. TrEST Research Park shall on best effort basis undertake review of the deliverables submitted by the Bidder and furnish comments in 15 days from the date of submission of the deliverables. TrEST Research Park shall accord all required approvals to proceed to the next component of

work in not more than additional 15 days of time from submission of revised deliverables incorporating the suggested comments.

13.7 General Instructions

1. **Deviations:** The offers with deviations in commercial terms and technical terms of the RFP document are liable for rejection.
2. **Black List:** All the intending bidders shall agree that in the event of the documents furnished with the offer being found to be bogus or the documents contain false particulars, they shall be blacklisted for future RFPs/association with TrEST Research Park.
3. **Bidder's Location:** The bidders are requested to furnish the exact location of their registered office with detailed postal address and pin code, telephone, and fax numbers, etc., in their proposal to this RFP to arrange inspection by TrEST Research Park, if considered necessary.
4. **Communication:** All communication shall be made to the registered email of the bidder in the e-tender systems and TrEST Research Park shall not be responsible for non-receipt or delay of any such communication.
5. **Corrupt and Fraudulent Practices:** TrEST Research Park requires compliance with its policy regarding corrupt and fraudulent/prohibited practices as set forth in this proposal. In further pursuance of this policy, the selected service provider(s) shall permit TrEST Research Park or its representatives to inspect the accounts, records and other documents relating to the submission of the Proposal and execution of the contract, in case of award, and to have the records inspected by TrEST Research Park.
6. **Conflict of Interest:** The service provider(s) is required to provide professional, objective, and impartial services, at all times holding TrEST Research Park's interests paramount, strictly avoiding conflicts with other assignments or its own corporate interests, and acting without any consideration for future work.
7. **Disclaimer on Contractual Obligations and Governing Agreement:** This Request for Proposal (RFP) is issued solely for the purpose of inviting proposals and evaluating bidders. Except for provisions expressly stated to be binding, nothing contained in this RFP shall be construed as creating any contractual rights, obligations, or liabilities. The final rights, obligations, liabilities, penalties, royalty terms, exit conditions, and enforceability shall be governed exclusively by the Agreement(s) executed with the Selected Bidder. In the event of any inconsistency between the provisions of this RFP and the executed Agreement(s), the provisions

of the Agreement(s) shall prevail.

The bidder has an obligation to disclose to TrEST Research Park any situation of actual or potential conflict that impacts its capacity to serve the best interests of TrEST Research Park. Failure to disclose such situations may lead to the disqualification of the supplier or the termination of its contract and/or sanctions by the Government.

14 Submission Guidelines

Submission Process: For submission of bids, all interested bidders must register online as explained above in this document. After registration, bidders shall submit their bid online on `www.etenders.kerala.gov.in` along with online payment of fees.

For page-by-page instructions on bid submission process, please visit:

`www.etenders.kerala.gov.in` and click "Bidders Manual Kit" link on the home page.

It is necessary to click on the "Freeze bid" link/icon to complete the process of bid submission; otherwise, the bid will not get submitted online and shall not be available for viewing/opening during the bid opening process.

Documents to be Submitted

- Pre-Qualification cum Technical Bid documents as per Section 11.1.
- Financial bid as per the project funding breakup as per Section 12.4.

14.1 Submission Deadline and Contact

- Last Date for Submission: 27/02/2026, 5.00 pm
- Submission Email/Portal: http://www.etenders.kerala.gov.in

Contact for Clarifications:
e-mail: trestpark@kerala.gov.in,
Phone : 0471- 2598555, 9188933426

Annexures: The following annexures are provided to assist in preparing the Pre-Qualification documents to be submitted. The format for the technical documents may be prepared as per the annexures; however, it is not limited to them—additional details may be included in the technical qualification documents to enrich the technical proposal.

- Annexure 1: Format for Covering Letter
- Annexure 2: Undertaking

- Annexure 3: Power of Attorney
- Annexure 4: Declaration by the Bidder
- Annexure 5: Undertaking for No Blacklisting & No Banning
- Annexure 6: Certificate of Financial Information
- Annexure 7: Certificate of Prior Funding Received
- Annexure 8: Curriculum of Proposed Resources (Key Personnel)
- Annexure 9: Template for RFP Proposal
- Annexure 10: Detailed Project Report
- Annexure 11: Equipment Specification Submission Format

Annexure 1: Format for Covering Letter

(This letter is to be submitted on the official letterhead of the bidder, signed by the authorised signatory.)

Sir,

I/We hereby e-tender to render the services under annexed terms and conditions of contract, the whole of the articles referred to and described in the attached specification and quantity decided by the TrEST Research Park, at the rates quoted against each item.

I am/We are remitting herewith the required amount of Rs._____ towards the Registration Fee by electronic payment vide transaction No. _____ dated _____.

Yours faithfully,

Place: _____ Signature: _____

Date: _____ Name: _____

Designation: _____

(Office Seal)

Documents Enclosed

- List the documents enclosed

Annexure 2: Undertaking

(To be provided on Rs.200 Non-Judicial Kerala Stamp Paper)

Subject: *Selection of manufacturing companies in advanced pilot production and commercialization, including resource mobilization and marketing of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium. Operations will commence at Travancore Titanium Products Ltd. (TTPL).*

With reference to the RFP Document for the captioned Project, I/we, _____ (Name, Designation), authorised signatory of _____ (Name and full address of the bidder), having examined all relevant documents and understood their contents, hereby undertake that the Proposal is unconditional and unqualified.

1. I/We confirm that I/we have examined the terms and conditions published in the RFP and accordingly submitted the application. The proposal is unconditional and unqualified.
2. All information provided in the Proposal is true and correct and all documents accompanying such Proposal are true copies of their respective originals.
3. This statement is made for the express purpose of establishing a pilot production facility for LTO-NMC/Graphite-LFP/LTO-LFP cells and batteries at TTPL.
4. I/We shall make available to TrEST Research Park any additional information it may deem necessary or require for supplementing or authenticating the Proposal.
5. I/We acknowledge the right of the TrEST Research Park to reject our application without assigning any reason and hereby waive our right to challenge the same on any account whatsoever.
6. I/We certify that in the last three years, I/we have neither failed to perform on any contract, nor been expelled, nor had any contract terminated for breach on our part.
7. I/We declare that:
   (a) I/We have examined and have no reservations to the RFP Documents, including any Addendum issued by TrEST Research Park.
   (b) I/We do not have any conflict of interest in accordance with the RFP provisions;

(c) I/We have not engaged in corrupt, fraudulent, coercive, undesirable, or restrictive practices;

(d) I/We have taken steps to ensure our representatives also comply with these ethical standards.

8. I/We understand that TrEST Research Park may cancel the Selection Process at any time and is not bound to accept any proposal.
9. I/We certify that neither we nor our Associates have been convicted or indicted for offences that could impact our ability to undertake this project.
10. I/We certify that we have not been charge-sheeted or convicted by a court for matters affecting the integrity or security of the country.
11. I/We irrevocably waive any legal right to challenge decisions made by TrEST Research Park or the Government in connection with the selection process.
12. I/We understand that we have no claim or right if our Proposal is not accepted or opened.
13. I/We agree to keep this offer valid for 120 days from the date of opening of the technical bid.
14. I/We have studied the RFP documents and shall not claim rights over any information provided by TrEST Research Park during the selection process.
15. The Technical and Financial Proposals are submitted in separate covers on the e-tenders portal.
16. I/We agree to abide by all the terms and conditions of the RFP Document. In witness thereof, I/we submit this Proposal in accordance with the RFP.

Signed by Sri _____
(Date) _____

In the presence of witnesses:
1. _____
2. _____

Annexure 3: Power of Attorney

(On Stamp Paper of requisite Stamp value)

Know all men by these presents, we, _____ (name of Firm and address of the registered office) do hereby constitute, nominate, appoint and authorise Mr / Ms _____ son/daughter/wife and presently residing at _____, who is presently employed with us and holding the position of _____ as our true and lawful attorney (Hereinafter referred to as the — Authorized Representative) to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Proposal for and selection as the startup/company for including but not limited to signing and submission of all applications, proposals and other documents and writings, participating in pre-bid and other conferences and providing information/ responses to the TrEST Research Park, representing us in all matters before the TrEST Research Park, signing and execution of all contracts and undertakings consequent to acceptance of our proposal and generally dealing with the Authority in all matters in connection with or relating to or arising out of our Proposal for the said Project and/or upon award thereof to us till the entering into of the Agreement with the TrEST Research Park.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorised Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorised Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, THE ABOVE - NAMED AUTHORISED REPRESENTATIVE HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____, 2026.

For
(Signature, name, designation and address)

Witnesses:

1. _____

2. _____

Notarized

Accepted:
(Signature, name, designation and address of the Attorney)

Annexure 4: Declaration by the Bidder

RFP Notification No: _____, **Dtd** _____

Subject: *Selection of manufacturing companies/startups in advanced pilot production and commercialization, including resource mobilization and marketing of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium. Operations will commence at Travancore Titanium Products Ltd. (TTPL)*

To
The CEO
TrEST Research Park

We, the undersigned, declare that:

1. We have examined and have no reservations to the Bidding Document, including Addenda No. (if any);
2. We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule;
3. Our Bid shall be valid for a period of 4 months from the date fixed as deadline for the submission of RFPs in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
4. If our Bid is accepted, we commit to submit a Security Deposit in the amount of 3 percent of the Contract Price for the due performance of the Contract;
5. We are not participating, as Bidders, in more than one Bid in this bidding process;
6. Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the TrEST Research Park or Government of Kerala;
7. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.

Signature: _____

Name: _____
Date: _____

Annexure 5: Undertaking for No Blacklisting & No Banning

(To be provided on Rs.200 Non-Judicial Stamp paper. In Case of JV the following format is to be provided by Each Member of the Joint Venture on their respective letterhead, signed by respective authorized Signatory along with Authorized Signatory for which POA is attached with Bid)

To
The CEO
TrEST Research Park

Sub: RFP for the selection of manufacturing companies/startups with relevant experience in the production of electric vehicle cells and batteries for the pilot production of LTO-NMC / LTO-LFP cells, batteries, battery management systems, and battery packs for electric vehicles at Travancore Titanium Products Ltd. (TTPL).

I / We hereby declare that presently our Company / Limited Liability Partnership / Partnership Firm / Sole Proprietorship is having an unblemished record and is not declared ineligible for corrupt / fraudulent practices by any State / Central Government / PSU on the date of Bid Submission.

I / We further declare that presently our Company / Limited Liability Partnership / Partnership Firm / Startup is not blacklisted and not declared ineligible for reasons other than corrupt / fraudulent practices by any State / Central Government / PSU on the date of Bid Submission.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, our security may be forfeited in full and the RFP if any to the extent accepted may be cancelled.

(Signature & Seal of Authorized Signatory for which POA attached)

Name of Authorized Signatory: _____

Designation: _____

Date: _____

Place: _____

Annexure 6: Certificate of Financial Information

(On Letterhead of the respective entity for which the below details are provided.) (Rupees in Crores)

S/N	Financial parameters	FY 23-24	FY 22-23	FY 21-22
1.	Net Worth			
	a) Paid up Capital			
	b) Free Reserves and Surplus*			
	c) Misc expenses to the extent not written off			
	Net Worth (a + b - c)			
2.	Annual Turnover **			

** Free Reserve and Surplus shall be Exclusive of Revaluation Reserve, written back of Depreciation Provision and Amalgamation.*
*** Annual total Income/turnover as incorporated in the Profit and Loss Account excluding non-recurring income, i.e., sale of fixed assets etc.*

It is certified that all the figures are based on audited accounts read with auditors report and notes to accounts etc.

(Signature & Seal of Authorized Signatory)
Name of Authorized Signatory:
Designation:
Date:
Place:

(Signature & Seal of CCA)
Certifying Chartered Accountant (CCA):
Name of Firm:
Date:
Place:
UDIN No:

Note:

1. In addition to the above certificate from Chartered Accountant, bidder is required to submit the firm's annual audit report, balance sheet, profit & loss and income tax returns / CA certificate for last three years.
2. In case the figures in the certificate are not explicitly available in the balance sheet/profit and loss account, an explanatory note just highlighting the details may be added with certification by the CCA.

Annexure 7: Certificate of Prior Funding Received

(For R&D in Lithium-ion Cell and Battery Production)

(To be submitted on the official letterhead of the organization and signed by the Head of the Institution/Authorized Signatory)

This is to certify that our organization, _____, has received funding support for Research and Development (R&D) activities related to Lithium-ion cell technology and/or battery production from the following agency/agencies:

1. **Name of Funding Agency:** _____
2. **Title of the Project:** _____
3. **Project Sanction Number:** _____
4. **Duration of the Project:** _____
5. **Total Sanctioned Amount (INR):** _____
6. **Date of Sanction:** _____
7. **Current Status:** _____ (Completed / Ongoing)

The above information is true and correct to the best of our knowledge and based on records available with the organization. Supporting documents such as **sanction letters, utilization certificates, and project completion reports (if applicable) are enclosed herewith**.

Authorized Signatory:
Name: _____
Designation: _____
Date: _____

Organization Seal

Annexure 8: Curriculum of Proposed Resources (Key Personnel)

Staff Information Table

Sl. No.	**Field**	**Details**
1	Name of Staff	
2	Proposed Position	
3	LinkedIn / ResearchGate Profile	
4	Employer	
5	Date of Birth Nationality	
6	Education	
Education Details: School/College/University	**Degree**	**Date Obtained**
7	Professional Certification or Membership in Associations	
8	Other Relevant Training	
9	Countries of Work Experience	
10	Languages	
Language	**Read**	**Write** / **Speak**
11	Employment Record	
From / **To**	**Company**	**Position Held**
12	Brief Profile	
13	Adequacy for the Assignment (Works Undertaken)	
14	Name of Assignment or Project	
15	Year Location Client	

16	Main Project Features	
17	Position Held	
18	Activities Performed	
19	List of Publications	
	i	
	ii	
	iii	
20	Reference (Name, Mobile No., Email ID)	
21	Testimonials (if any)	

Note: Only applicants with reference or testimonial and proof of involvement in project would be considered for marks.

Annexure 9: Template for RFP Proposal

Selection of manufacturing companies/startups in advanced pilot production and commercialization, including resource mobilization and marketing of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium. Operations will commence at Travancore Titanium Products Ltd. (TTPL)

Company/Startup Particulars

1. Reference RFP Number: [Add the number of RFP notified on TrEST Research Park site]
2. Reference RFP Date: [Add the date of RFP notified on TrEST Research Park site]
3. Name of the project for which RFP Response is submitted: [EV Consortium]
4. Name of the company/startup: [Name of the bidding agency]
5. Legal Name: [Name of the Company as registered with the relevant authority]
6. Legal Status: [Indicate the legal structure of the company/startup, such as a partnership, society, company/startup, etc.]
7. Registration Number: [Provide the unique registration number assigned to the company/startup by the relevant authority if any]
8. Date of Registration: [Indicate the date when the company/startup was registered with the relevant authority]
9. Registered Address: [Provide the complete postal address of the company's/startup's registered office]
10. Full name of the contact person: [Provide the name of the Company's main contact person]
11. Designation of the contact person: [Provide the designation of the company's/startup's main contact person]
12. Phone Number: [Provide the mobile phone number of the company's/startup's main contact person]
13. Contact Email ID: [Provide the email address of the company's/startup's main contact person]

Organizational Capabilities

1. Background of Company: [Brief introduction about your company/startup, history, scope of work, and mission statement]
2. Introduction: [Concise introduction to the company/startup, highlighting key characteristics, year of establishment, and core activities]
3. History: [Detailed history of the company/startup, key milestones, major achievements, significant changes]
4. Mission & Vision: [Clear and concise mission and vision statement]
5. Services: [Overview of services offered, key areas of expertise, value proposition, and relevant experience]

Organizational Structure and Capacity

1. Total number of Employees: [Number of employees]
2. Size of the management team and roles: [Details of management team size and roles]
3. Size of the support staff: [Details of support staff and roles]
4. Unique capabilities or resources that set your company/startup apart

Relevant Experience in the Field

1. Experience: [Detailed description of relevant experience, years, areas of specialization, previous projects]
2. Key Personnel: [Overview of key personnel, their roles, responsibilities, experience, and qualifications]
3. Project Experience: [Details of most relevant and recent projects/R&D, goals, deliverables, outcomes]
4. Client References: [List of client references, contact information, and brief description of the work done]
5. Quality Management: [Overview of quality management system, certifications, processes, procedures]

Similar Projects/R&D Activities

1. Details: [Overview of relevant and recent projects/R&D activities — name, location, objectives, scope, duration]

2. Services Provided: [Description of services provided, areas of expertise, success stories]
3. Key Personnel: [Details of key personnel involved in the project, roles, experience]
4. Project Outcomes: [Summary of outcomes achieved, deliverables, milestones, innovations]
5. Client References and Recommendations: [References, contact information, and description of work done]
6. Lessons Learned: [Summary of lessons learned, areas for improvement, opportunities for innovation]

Certifications & Awards Received

1. Name of Certification/Award: [Name of the certification/award]
2. Issuing Body: [Name of the issuing authority]
3. Certification Number: [Unique identification number]
4. Date of Issue: [Date of issue]
5. Expiration Date: [Date of expiration]

Annexure 10: Technical Proposal

Interested bidders must submit a detailed Technical Project Report, including the following key components, but not limited to the format provided :

Executive Summary

- Overview of the proposed pilot project
- Objectives, outcomes, and expected impact on the EV ecosystem in Kerala.

Technical Proposal Includes

- Cell Chemistry Details: Specifications of the LTO-NMC/Graphite-LFP/LTO-LFP cell combinations.
- Manufacturing Process:
  - Electrode preparation
  - Cell assembly (cylindrical/prismatic)
  - Electrolyte filling
  - Sealing and formation cycles
  - Battery assembly
  - BMS integration, etc.
- Machinery & Equipment Details, Materials and Human Resorce Requirements:
  - The required machines for coating, calendering, cell assembly, formation, testing, etc. shall be provided in the format given in Annexure 11.
  - Material requirements and annual production capacity, including the process flow from raw materials to finished products.
  - Human resource requirements for the production
- Safety, Quality & Environmental Protocols.
- BMS & Battery Pack Integration Plans.
- Dry room facility requirements, etc.

Space Utilization & Infrastructure Plan

- Layout plan for utilizing the 9020 sq. ft. TTPL space.
- Modifications required (power backup, HVAC, clean room setup, etc.).

- Compliance with safety & electrical regulations.

Action Plan

- Timeline
- Productionn Strategy

Number of working days per year	
Number of Shifts per day	
Installed capacity	
Capacity utilization 1 Year 2 Year 3 Year	

  - Volume of production
  - Unit price (Ex: 2.1 V, 40 Ah, LTO-NMC cells)

- Sustainability plan
- Strengths, Weaknesses, Opportunities, and Threats (SWOT) for LTO-NMC/Grpahite-LFP/LTO-LFP in EV and Energy Storage Systems (ESS)
- Milestones and deliverable
- Field validation plan

Business Analysis

- Capex and Opex
- Marketing strategy
- Sales revenue

Sales per year	
Unit price	
Expected sales revenue	

- Scale-up strategy
- Target customers, applications and projected demands

Risk & Mitigation Plan

- Potential technical or supply chain risks.
- Contingency measures and quality control mechanisms.
- Plan for insurance coverage.

Collaboration & Field Testing

- Agreement/MoU or intent of collaboration with vehicle partner (e.g., KAL, KELTRON etc.).
- Mechanism to integrate and test batteries in 2W/3W applications.

Future Expansion & Scalability

- Detailed commercial production plan
- Interest and capability to relocate the Kerala EV Industrial Park for long-term manufacturing.

Waste Disposal & Recycling

- Compliance with applicable environmental laws and regulations.
- Plan for segregation and identification of hazardous and non-hazardous waste.
- Safe handling, storage, and disposal of hazardous materials (e.g., solvents, heavy metals, electrolytes).
- Process for recycling defective/rejected cells and batteries through authorized recyclers.
- Recycling strategy for production scraps (e.g., electrodes, separators).
- Monitoring and reporting mechanisms for waste generated and disposed.
- Suggestions for minimizing waste and promoting material recovery/circular economy.

Conclusion

(Write few sentences)

Annexure 11: Equipment Specification Submission Format

Below is the Major Equipment Specification Submission Format, designed as a structured table for bidders to fill in their proposed specifications for each stage of the cell production line. Bidders may also include additional equipment and specifications that are not listed in the given format. This format pertains to the Pilot Production Facility for Cells (250 Prismatic + 250 Cylindrical Cells per day in two shifts).

Equipment list with indicative specifications

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
1	Vacuum planetary mixer (cathode)	Capacity 250–300 L (usable ≈ 175–210 L); vacuum degas; jacketed temp control $\pm 1^0 C$; recirculation/pump out; PLC recipes		
2	Vacuum planetary mixer (anode)	Capacity 250–300 L (or 500 L if prefer headroom); same features as cathode		
3	Solids dosing skid & binder pumps (1 skid each line)	Loss-in-weight feeders, gear/piston pumps, flow meters ±1%		
4	Magnetic de-ironing filtration modules (1 per slurry discharge)	Inline rare-earth magnetic filter (removes Fe)		
5	Vacuum degassing module (1 per slurry line)	Vacuum ≤ -90 kPa; degassing tank with optical level; inline return loop		

Continued on next page

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
6	Slot-die transfer coater (roll-to-roll) (1 line)	Working width 300–500 mm adjustable; metering pump ±1%; web tension control; recipe PLC; edge trim		
7	Multi-zone hot-air dryer / solvent recovery interface (1 line)	Multi-zone (3–6) oven; temp range 60–150^0C; adjustable speed; exhaust to NMP condenser + scrubber; solvent recovery ≥95%		
8	Hot continuous calendering (rolling) press	Heated rolls; nip force adjustable; thickness control ±2 µm; width 300–500 mm; Roller Temperature Range: 60–100^0C adjustable		
9	Continuous slitter-rewinder & servo sheeter	Slitting accuracy ±0.1 mm; turret sheeter for prism sheets; rewind OD up to 1,000–1,200 mm		
10	Web inspection & coating weight gauge (Inline)	Beta/X-ray thickness gauge; optical inspection; tension sensors		
11	Automatic winding machine (AW-type) (2 (parallel)) (Cylindrical)	Electrode width ≤300 mm; winding speed 80–120 rpm; tension control ±3%; auto tab fixation & splice detection		

Continued on next page

Sl. No.	Process Stage / Equipment Name	Indicative Specifications	*Equipment Specifications and Model No. by the Bidder	Remarks (if any)
12	Automatic stacking machine with servo press (2 (parallel)) (Prismatic)	Sheet feeder, vision alignment, throughput 8–12 stacks/hr per machine (or 60–100 electrodes/min feed), stack press with force control		
13	Battery tab flattening machine (1 (shared))	Flatten tabs (Cu/Al), adjustable force, accuracy ±0.05 mm; cycle ≤5 s		
14	Ultrasonic / Laser tab welding unit (flexible fixtures) (2 (or 1 dual-head + 1 spare))	Frequency 20–40 kHz (ultrasonic) or fiber laser 100–200 W; interchangeable fixtures for cyl & prism; weld monitoring		
15	Visual & dimensional inspection station (2nos)	Camera/vision inspection for alignment/splice/defect rejection		
16	Vacuum electrolyte filling station (cylindric) (1 line (multi-head))	Vacuum down to ≤100 mbar; dosing accuracy ±0.5%; inline 0.2 μm filtration; inert N_2 blanketing; throughput ≥ 20–30 c/h		
17	Vacuum electrolyte filling station (prismatic) (1 line)	Same as cylindrical but with sheet/jig fixtures; dosing ±0.5%		

Continued on next page

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
18	Crimping / cap welding & sealing stations (2 (one per format))	Crimping torque control; laser seal or crimp; automated cap placement		
19	Helium sniff / pressure-decay leak tester (2 nos)	Sensitivity $\leq 110^{-6}$ mbar·L/s; automatic reject		
20	Formation racks & programmable cyclers (Modules to provide 600–1,200 concurrent slots depending formation time) (Cylindrical)	Channels per rack 48–96; per-channel up to 5 V, up to 100 A; data logging; thermal control; formation time planning (24–48 h); integrated DCIR measurement (pulse method, $\leq 1\%$ FS accuracy, voltage resolution $\leq 100\mu V$)		
21	Formation racks & programmable cyclers (Modules to provide 600–1,200 concurrent slots depending formation time) (Prismatic)	Same specs as cylindrical; separate racks/configuration		

Continued on next page

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
22	Laser Sealing Machine (Cylindrical Cells)	Sealing speed: 2–5 sec per cell (depends on material); 200–300 cells/hour per head; Accuracy: ±0.1mm		
23	Ultrasonic Cleaning Machine (For Cylindrical Cells / Components)	Frequency: 28–40 kHz; Temperature range: Ambient – 80°C; Cycle time: 2–10 min per batch		
24	Heat Sink Furnace (Post-Assembly Thermal Treatment) (for Cylindrical Cells)	Temperature range: $50–250^0C$; Temperature uniformity: $\pm 3^0C$; Atmosphere: Inert (N_2 / Argon) or air depending on process		
25	Manual Code Printer (for Cylindrical Cells)	Suitable for the cylindrical cell		
26	Helium Test Machine (Before and After) (for Prismatic Cells)	Detection Sensitivity: $\leq 110^{-6}$ mbar · L/s; Helium Pressure: 0.1 – 0.5 MPa (adjustable); Cycle Time: 60 – 120 seconds per cell		
27	Laser Sealing Machine (for Cylindrical Cells)	Laser Power: Adjustable; Spot Diameter: 0.1 – 0.3 mm; Welding Speed: 2 – 5 mm/s; Positional Accuracy: ± 0.05 mm		

Continued on next page

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
28	Manual Battery Film Warping Machine (for Cylindrical Cells)	Cell Size Compatibility		
29	Aging chambers / thermal soak racks (for Cylindrical Cells)	Temp range 25–60 °C; racks sized to hold formation output; data logging; capacity to hold 500–1,200 cells based on dwell		
30	Aging chambers / thermal soak racks (for Prismatic Cells)	Temp range 25–60 °C; racks sized to hold formation output; data logging; capacity to hold 500–1,200 cells based on dwell		
31	Battery cyclers & impedance testers (for Cylindrical Cells)	Channels with 0–5 V, up to 100 A, fast impedance (EIS) measurement; automated grading software (1 bank (8–16 channels min))		
32	Battery cyclers & testers (for Prismatic Cells)	Channels with 0–5 V, up to 100 A, fast impedance (EIS) measurement; automated grading software (1 bank (8–16 channels min))		
33	AC impedance spectrometer, CT / X-ray (optional)	Impedance up to 1 MHz; X-ray for internal defects		

Continued on next page

Sl. No.	**Process Stage / Equipment Name**	**Indicative Specifications**	***Equipment Specifications and Model No. by the Bidder**	**Remarks (if any)**
34	Labeling & automated packing station (for both formats)	Barcode printing; tray/pallet packing; ESD safe; documentation printing		
* The bidder shall attach the brochure of all equipment from the manufacturer.				

Instructions to Bidders

1. Bidders shall fill all columns with the actual specifications and attach relevant technical datasheets or brochures for each equipment item.
2. Equivalent or higher performance specifications are acceptable, subject to technical committee approval.
3. Any deviation must be clearly highlighted in the Remarks column.
4. Supporting documents such as equipment layout, manufacturer details, warranty terms, and maintenance plan should be annexed separately.
5. Bidders may include any additional equipment not listed above.

Bidder's Declaration

We hereby declare that the information provided above is true to the best of our knowledge and that the proposed equipment meets or exceeds the functional parameters specified in the tender document.

Authorized Signatory: _____
Name & Designation: _____
Company Name: _____
Date: _____
Seal: _____

Appendix 1: Process of Manufacturing of LTO Battery

Lithium Titanate (LTO) battery chemistry is recognized for its exceptional safety and longevity. Unlike traditional lithium-ion batteries, LTO batteries are resistant to the formation of lithium dendrites, which can lead to internal short circuits and thermal runaway. This safety feature is particularly significant in applications where batteries operate in low-temperature environments, reducing the risk of catastrophic failure. The robust safety profile of LTO batteries is complemented by their broad operating temperature range, from -30 to 55 degrees Celsius, making them suitable for a wide array of climates and applications.

Another key advantage of LTO batteries is their extended lifespan. The unique chemistry of LTO results in negligible volume changes during charging and discharging cycles, providing greater structural stability. This leads to a significantly longer cycle life compared to other lithium-ion chemistries, with commercial LTO cells capable of enduring up to 25,000 cycles. This durability makes LTO batteries a preferred choice for applications requiring long-term, reliable energy storage.

Additionally, LTO batteries exhibit a high level of thermal stability due to the absence of carbon, which further reduces heat generation and enhances safety. With their combined safety, durability, and wide operational range, LTO batteries are an attractive option for electric vehicles, energy storage systems, and other applications where safety and longevity are paramount.

Manufacturing Process

The selected startups or companies will receive technology transfer to manufacture LTO batteries through collaborations with Travancore Titanium Products Limited (TTPL), Vikram Sarabhai Space Centre (VSSC), and the Centre for Development of Advanced Computing (C-DAC). To support this manufacturing process, TTPL will provide the necessary quantities of Lithium Titanate (LTO) material. The EV battery production value chain is shown in the Figure 4. This diagram serves as a guide to help understand the flow of the production process and the specific steps required to produce high-quality LTO batteries. Battery technology development focuses on short-to-medium term (high TRL) and long-term (low TRL) goals. The former aims for rapid vehicle electrification, particularly in low-cost two- and three-wheeler segments, extending to four-wheelers. It involves established chemistries like NMC, LFP, LMFP cathode variants, and diverse anode materials such as LTO, graphite, silicon, and supercapacitors. Lab-scale studies yield quick insights, aiding subsequent scaling up for manufacturing data. This strat-

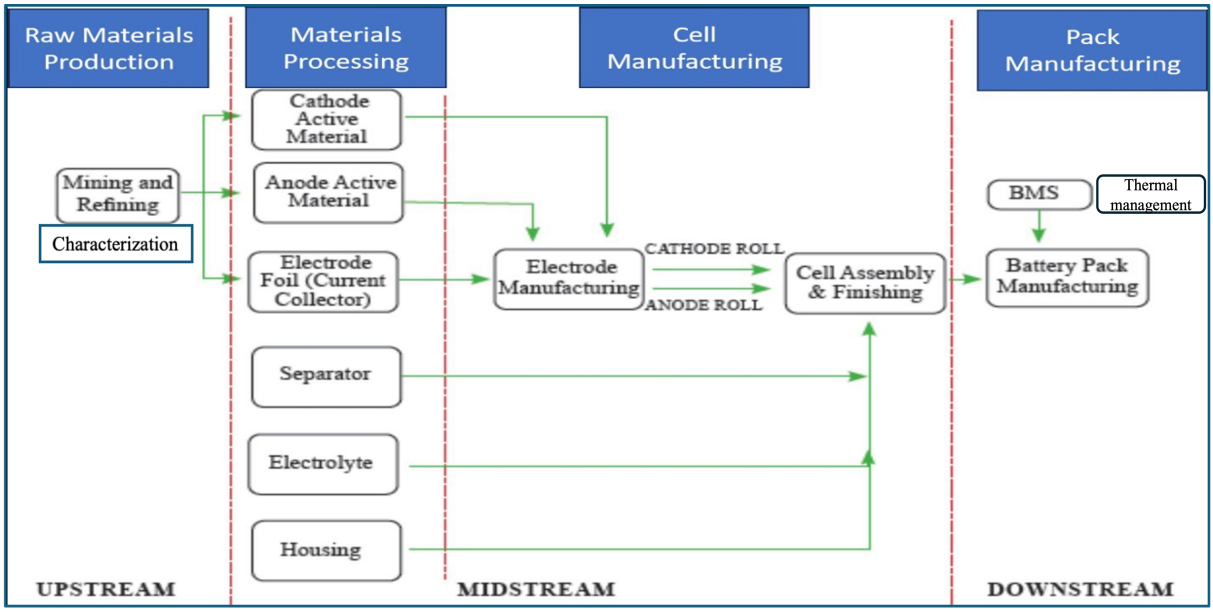

Figure 4: Battery Production Value Chain

egy enables the creation of high-quality, cost-effective indigenous cells, aligning Indian Electric Vehicles (EVs) with global standards. The long-term focus explores emerging technologies like Sodium Ion Batteries (SIBs), Solid-State Batteries (SSBs), and metal-air batteries, evaluated within an Indian context. Research may reveal additional promising technologies tailored for Indian conditions. Efforts also target indigenous manufacturing of cell raw materials, collaborating with institutes like the Central Electrochemical Research Institute (CECRI) to enhance material performance. Exploration of metallurgical processes for lithium extraction to produce cathode active material (CAM) precursors is considered, anticipating improved access to lithium resources.

The developed technologies will need to be taken through scale up studies (TRL 4-6) to determine their commercial viability, in two phases including the R&D cell fabrication and Prototype cell fabrication. The first phase will require R&D cell fabrication centres where small multi-layer cells are fabricated including the development of BMS and the electronic components with the required softwares. The EV consortium under K-DISC will complete this phase and transfer the technology to the second phase to the selected companies/startups.

The selected companies/startups play a crucial role in this phase, utilizing technology transferred from the EV consortium for scale-up/pilot production. Here, the selected company/startups commence the pilot production of batteries within their production units, replicating commercial manufacturing processes but with reduced throughput. This encompasses cell production, including slurry mixing units, roll-to-roll coaters, and automated assembly, alongside battery pack and BMS production with necessary software components. The Centre should construct production-size cells in various formats

(cylindrical, prismatic, pouch), most probably cylindrical cells suitable for two & three-wheelers, incorporating quality control measures and extensive testing capabilities. Successful outcomes establish technology proof of concept and electrode design, paving the way for the next scale-up phase. Following the pilot production level's successful completion, the chosen company/startup may advance to the subsequent phase with relevant authorities' approval.

Below are the completed cell specifications and the charge-discharge characteristics of the developed cell at VSSC. The following sections outline the standard specifications for the Lithium Titanate Oxide (LTO) battery and its components, detailing the requirements for producing a successful pilot production run. These specifications serve as a benchmark for quality and performance, providing a comprehensive guide to the key elements involved in manufacturing these batteries.

Specifications of LTO Cell

The technical specifications for the 2.1 V, 40 Ah Lithium Titanate Oxide (LTO) anode + Lithium Nickel Manganese Cobalt Oxide (NMC) as cathode cell are provided in Table 5. These specifications encompass various parameters, including electrical characteristics, physical dimensions, and performance metrics. They are specifically designed for use in electric vehicles such as cars, three-wheelers, and two-wheelers etc.

Specifications of Battery Management System

The Battery Management System (BMS) incorporates sensors for monitoring current, voltage, and temperature, as well as semiconductor switches for controlling charge and discharge operations. Designed in alignment with the operational parameters of Lithium Titanate Oxide (LTO) cells, the BMS developed by CDAC enables continuous monitoring of critical parameters such as cell voltage, temperature, and internal resistance within the battery module. To ensure safe operation, the BMS includes an automatic cell balancing feature, which maintains uniform charge across all cells. In addition, robust protection circuits safeguard the battery module against conditions such as overcharging, over-discharging, over-voltage, and over-current. The BMS is also responsible for logging key parameters and generating actionable insights regarding the State of Charge (SoC) of the battery module during both charging and discharging cycles. Communication between the BMS and the vehicle's main control unit (Vehicle Control Unit – VCU) is established via the Controller Area Network (CAN) protocol. Through this interface, the BMS transmits vital data such as battery pack voltage, individual cell voltages, SoC, and temperature readings, enabling effective control and monitoring of the battery system. The detailed technical specifications of the BMS are provided in Table 6.

Table 5: Specifications of LTO Cell

No.	Parameter	Value
Electrical Parameters		
1	Type / Form factor	Prismatic
2	Chemistry of battery	LTO-NMC
3	Nominal voltage	2.1 V
4	Rated capacity	40 Ah @C/2, 20^0C
5	End of charge voltage	2.8 V
6	End of discharge voltage	1.5 V
7	Volumetric energy density	109 Wh/L
8	Gravimetric energy density	60 Wh/kg
9	Internal resistance	$\leq$ 1.8 mΩ
10	Charge current (Recommended)	C/5 (8 A)
11	Discharge current (Recommended)	1C (40 A)
12	Max. continuous charge current	3C (120 A)
13	Max. continuous discharge current	5C (200 A)
14	Operating temperature range	0-50°C
15	Storage temperature	20°C to 25°C
Physical Parameters		
16	Width (mm) × Height (mm) × Thickness (mm)	(135±0.5) × (215*±1) × (29±0.5) * Height on body
17	Weight (g)	1550 ± 50

Table 6: Battery Management System

No.	Parameter	Value
1	Input Voltage	Min: 20 VDC, Max: 57 VDC
2	Over Charge	Detection Voltage: 2.8 V ±2% Release Voltage: 2.7 V ±2% Detection Delay Time: 500–1200 ms
4	Over Discharge	Detection Voltage: 1.3 V ±2% Release Voltage: 1.8 V ±2% Detection Delay Time: 500–1200 ms
5	Over Discharge Current	Detection Current: 180 A Detection Delay Time: 450–1550 ms Release Conditions: Isolate battery
6	Over Charge Current	Over Current: 60 A Detection Delay Time: 500–1500 ms Release Conditions: Isolate battery
7	Max Continuous Charge/Discharge Current	Charge: 60 A Discharge: 180 A
8	Isolation Resistance	Isolation Resistance PCM: $\leq$ 60 mΩ
9	Balancing Function	Cell Balancing Current: 100 mA Cell Voltage Resolution: 1.5 mV
10	Communication	CAN: 500 kbps
11	Operating Temperature	-20°C to 85°C
12	Safety	As recommended by ARAI/BIS

Specifications of LTO Battery pack

The electrical and physical parameters of the Lithium Titanate Oxide (LTO) battery pack with a capacity of 40 Ah are presented in Table 7. This table provides a detailed breakdown of critical metrics such as voltage, current, energy capacity, dimensions, and weight. These parameters are crucial for ensuring compatibility with a wide range of electric vehicles and other applications. The values listed serve as reference points for manufacturers and designers to maintain consistent quality and performance standards. To achieve 48 V nominal voltage using 2.1 V cells, the closest standard configuration is 23s1p (23 cells in series):

2.1 V $\times$ 23 cells = 48.3 V nominal

40 Ah capacity (1p, no parallel strings)

Total energy = 48.3 V $\times$ 40 Ah = 1.93 kWh

The specifications and chemistries of cells and batteries, including battery management systems and packaging, are not limited in scope and may evolve over time based on emerging requirements. Any such variations will be subject to the approval of the EV Consortium partners and the relevant governing

authority.

Table 7: LTO Battery Pack

No.	Parameter	Value
Electrical Parameters		
1	Chemistry of Battery	Lithium Titanate Oxide (LTO)
2	Nominal Voltage	48 V
3	Rated Capacity	40 Ah
4	Series Parallel Configuration	23S
5	Energy	1920 Wh
6	Volume-Energy Density	120 Wh/L
7	Weight-Energy Density	– Wh/kg
8	Nominal Packing	Aluminium Enclosure
9	Max. Continuous Charge Current	240 A
10	Max. Continuous Discharge Current	240 A
11	10s Max. Pulse Charge/Discharge Current	400 A
12	Standard Charging Temperature Range	-20°C to +65°C
13	Standard Discharging Temperature Range	-20°C to +65°C
14	Storage Temperature Range	-20°C to +45°C
15	Efficiency	99%
16	Charging Mode	CC/CV
17	Over Charge Protection in BMS	56 V
18	Deep Discharge Protection in BMS	36 V
19	Enclosure Rating	IP65 Metal Base
20	BMS Protections	Over charging, Deep discharging, Over voltage, Under voltage, Thermal runaway protections
Physical Parameters		
1	Dimensions (L × W × H)	Approx. 557.5 ± 5 × 198.5 ± 5 × 230.5 ± 5 mm
2	Weight	Approx. 29 kg

Configuration of Cells inside Modules

2.1 V, 40 Ah cells (Cylindrical/Prismatic) by connecting them in parallel or series as needed to achieve the desired voltage and ampere-hour. Vary the number of cells in a battery stack and choose a suitable casing along with a Battery Management System (BMS) to accommodate different Ah ratings.

Appendix 2: List of Applicable Codes and Standards

This Appendix provides a list of reference codes and standards, grouped under Technical, Quality, Safety, and Environmental requirements, along with their standard reference numbers. These standards are generally applicable to pilot cell and battery production facilities and are provided for guidance. The Selected Bidder shall comply with all applicable laws, rules, regulations, and standards in force in India. The list provided herein is indicative and not exhaustive, and bidders shall ensure compliance with any additional standards or statutory requirements relevant to the scope of work.

Sl. No.	Category	Standard / Code	Reference / Description
1	Technical – Cells & Batteries	IEC 62619	Safety requirements for secondary lithium cells and batteries for industrial applications
2	Technical – Performance	IEC 61960 (Series)	Performance requirements for secondary lithium cells and batteries
3	Technical – Industrial Batteries	IEC 62620	Performance requirements for lithium cells and batteries for industrial use
4	EV Traction Cells	IEC 62660 (Part 1/2/3)	Performance, reliability, and abuse testing of lithium-ion cells for EVs
5	EV Batteries (India)	IS 16046 (Part 2)	Lithium-ion cells and batteries for electric vehicles
6	Safety – Transport	UN 38.3	Transport testing requirements for lithium batteries
7	Safety – EV Batteries	AIS 156 (Phase II)	Safety requirements for traction battery packs in electric vehicles
8	Safety – Portable Cells	IEC 62133	Safety requirements for portable sealed lithium cells and batteries
9	Safety – General	IS 16270	Safety requirements for lithium-ion batteries
10	Quality Management	ISO 9001	Quality Management System
11	Environmental Management	ISO 14001	Environmental Management System
12	Occupational Safety	ISO 45001	Occupational Health and Safety Management System

Continued on next page

Sl. No.	Category	Standard / Code	Reference / Description
13	Testing & Calibration	ISO/IEC 17025	Competence of testing and calibration laboratories
14	Automotive Quality	IATF 16949	Quality management system for automotive production (recommended)
15	Fire & Life Safety	National Building Code (NBC)	Fire and life safety provisions for buildings
16	Electrical Safety	CEA Safety Regulations	Safety requirements for electrical installations
17	Electrical Installations	IS 732	Code of practice for electrical wiring installations
18	Earthing	IS 3043	Code of practice for earthing
19	Battery Waste	Battery Waste Management Rules	Waste handling, recycling, and EPR obligations
20	Hazardous Waste	Hazardous & Other Wastes Rules	Handling and disposal of hazardous wastes
21	E-Waste	E-Waste Management Rules	Disposal of electronic and electrical waste
22	Environmental Compliance	Environment (Protection) Act	General environmental protection requirements
23	Statutory Approvals	State Pollution Control Board Norms	Consent to Establish and Consent to Operate

Appendix 3: Agreement for Pilot Production and Commercialization of LTO-Based EV Battery Cells and Packs

This Agreement is made on this _____ day of _____ 2026

BETWEEN

Trivandrum Engineering Science& Technology (TrEST) Research Park, TC-4/2322, GEM Building, Opposite CET, Thiruvananthapuram – 695016, Kerala, India, represented by its .....acting on behalf of the EV Consortium managed by K-DISC (hereinafter referred to as "TrEST Research Park" which expression shall include its successors in office, permitted assignees) of the one hand

AND

_____, an entitiy (specify the legal entity) established/incorporated under .....India with its registered office at..... (hereinafter referred to as "Manufacturer" which expression shall include its successors, administrators, executors, permitted assignees) of the other hand. TrEST and the Manufacturer shall collectively be referred to as the "Parties" and individually as a "Party".

WHEREAS:

A. TrEST Research Park is a Research Park established to promote partnership and interaction between academic community and industry, with a focus on developing new technologies and fostering inventions.

B. The Government of Kerala has adopted an Electric Vehicle Policy with a vision to embrace electric mobility as a tool to promote shared mobility and clean transportation, and to create an ecosystem for manufacturing EV components in Kerala.

C. TrEST Research Park is part of the Kerala Electric Vehicle Consortium formed by the Government of Kerala with the objective of creating an electric vehicle ecosystem in the State, along with the Vikram Sarabhai Space Centre (VSSC), the Centre for Development of Advanced Computing, Thiruvananthapuram (C-DAC), and Travancore Titanium Products Ltd. (TTPL), with the Kerala Development and Innovation Strategic Council (K-DISC) serving as the anchor coordinator of

the EV Consortium.

D. The TrEST Research Park has issued a Request for Proposal (RFP), vide Tender ID TRP/69/2025/Tender-001, for the selection of a strategic partner for advanced pilot production and commercialization—including resource mobilization and marketing—of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium for establishment at TTPL.

E. The MANUFACTURING COMPANY has been selected through a competitive bidding process to provide the RFP response, including the Detailed Project Report (DPR), for the establishment of the pilot production facility at TTPL.

F. The Parties now wish to enter into this Agreement to set out the terms and conditions upon which the manufacturer will provide the consultancy services to the TrEST Research Park.

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

A. Definitions and Interpretation

"EV Consortium" means the Kerala Electric Vehicle Consortium formed by the Government of Kerala, comprising of Kerala Development and Innovation Strategic Council (K-DISC), Vikram Sarabhai Space Centre (VSSC), Centre for Development of Advanced Computing Thiruvananthapuram (C-DAC), Travancore Titanium Products Ltd. (TTPL), and the TrEST Research Par

"Force Majeure Event" means any event or circumstance or combination of events or circumstances that is beyond the reasonable control of a Party and that materially and adversely affects the performance by that Party of its obligations under or pursuant to this Agreement, which events or circumstances shall include, but not be limited to, acts of God, war, riot, civil commotion, fire, flood, earthquake, epidemic, pandemic, or other natural disaster.

"Government Contribution" refers to up to 20% funding support from KIIFB released through milestones.

"Kerala EV Industrial Park" means the proposed Kerala Electric Vehicle Industrial Park to be established at Vilapilsala in Thiruvananthapuram, Kerala.

"Intellectual Property Rights" means all patents, trademarks, service marks, logos, get-up, trade names, internet domain names, rights in designs, copyright (including rights in computer software) and moral rights, database rights, semi-conductor topography rights, utility models, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world.

"Pilot Production Facility" refers to the manufacturing unit established within TTPL premises for LTO cell and battery pack production.

"Technology Providers" refers to VSSC (cell chemistry & process) and C-DAC (BMS & electronics).

"Technology Package" includes process documentation, BMS design files, packaging designs, firmware, testing protocols, etc.

B. In this Agreemnet, Unless the Context Otherwise Requires:

(a) references to Clauses, Sub-Clauses, Paragraphs, Annexures, and Schedules are to clauses, sub-clauses, paragraphs, annexures, and schedules to this Agreement;

(b) use of singular includes the plural and vice versa;

(c) references to a "person" include any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(d) references to any statute or statutory provision include any statute or statutory provision which amends, extends, consolidates or replaces the same, or which has been amended, extended, consolidated or replaced by the same, and shall include any orders, regulations, instruments or other subordinate legislation made under the relevant statute;

(e) headings are for convenience only and shall not affect the interpretation of this Agreement;

(f) the words "include" and "including" are to be construed without limitation;

(g) references to "day", "month" or "year" shall mean a calendar day, calendar month or calendar year respectively;

(h) the RFP documents including all the terms and conditions contained therein shall form part of this agreement and shall be construed accordingly.

C. Scope of Work (Refer RFP, Section 3.2)

The Manufacturer shall:

- Phase I: Facility Establishment & Pilot Production (Initial 12 Months)
  - Detailed Facility Design and Engineering
  - Infrastructure Development & Utility Installation
  - Machinery & Equipment Procurement, Installation, and Commissioning
  - Technology Acceptance Implementation & Integration
- Phase II: Post-Pilot Expansion & Commercialization (Up to 3 Years)
  - Commercialization Strategy Development
  - Scaling Up of Manufacturing in Kerala EV Industrial Park
  - Obligation

  as more detailed in the RFP document

D. Roles & Responsibilities

Responsibilities of Manufacturer (Refer RFP, Section 7)

The Manufacturer shall:

1. Refurbish the allocated TTPL buildings and install required utilities.
2. Procure and commission all machinery, tools, and testing equipment.
3. Integrate technology transferred from VSSC and C-DAC.
4. Ensure compliance with AIS, BIS, safety and environmental norms.
5. Maintain strict confidentiality and adhere to IP licensing terms.
6. Conduct pilot trials, testing, validation, and reporting.
7. Manage raw materials procurement except LTO/LFP.
8. Submit periodic technical and commercial reports.
9. Operate facilities for a minimum binding period of 10 years.

Responsibilities of TrEST / EV Consortium (Refer RFP, Section 6)

TrEST / EV Consortium shall:

1. Provide 9020 sq ft built-up space at TTPL on subsidized rent.
2. Facilitate access to TTPL's existing utilities.
3. Provide capital grant up to 20% of project cost, released through milestones.
4. Supply LTO/LFP at concessional rates (subject to availability).
5. Support regulatory approvals, coordination, and technical mentoring.

E. Technology Transfer Conditions (Refer RFP, Section 8)

1. All IP shall remain with VSSC and C-DAC.
2. The Manufacturer receives a non-transferable production license for project duration.
3. Reverse engineering or sub-licensing is prohibited.
4. An NDA shall be signed prior to technology handover.
5. Royalty and technology licensing fee shall apply as mutually agreed.
6. Royalty obligations end after 8 years from date of agreement.

F. Financial Terms

The financial contribution for establishing the Pilot Production Facility shall follow a 20–80 cost-sharing model, defined as follows:

- Government Share (20%)
  - The Government support (KIIFB through SPV) under this project shall be in the nature of a Capital Support Grant, non-equity and non-ownership, limited to a maximum of twenty percent (20%) of the approved project cost, subject to achievement of milestones and compliance with the terms of the Agreement. Such support shall not confer any equity interest, management rights, or ownership over the Selected Bidder's business, assets, or intellectual property, unless explicitly provided in the Agreement.

- Bidder/Manufacturer Share (80%)
  - The selected Bidder/Manufacturer shall contribute a minimum of 80% of the total project cost, including expenses related to technology acquisition, equipment procurement, installation, commissioning, manpower, working capital, and other operational costs needed to establish and run the pilot facility.
  - Ownership of assets shall remain proportionate to funding, unless otherwise agreed in the final Agreement.

The government contribution will be disbursed to the selected company based on the milestones completed, as per the given table.

Milestone	Required Documents	Payment
Milestone 1: **Civil Work Completion**	• Submission of a report confirming completion of all civil works and establishment of utilities • Civil works completion certificate • Utility readiness certificate (power, HVAC, compressed air, ESD, water, safety systems) • Factory layout compliance report	25%
Milestone 2: Installation and Pilot Operation	• Delivery and installation reports for all machinery • OEM compliance certificates • Factory Acceptance Test (FAT) records (where applicable) • Calibration certificates for critical instruments • Trial production startup report (electrode making, cell assembly, formation, testing)	55%
Milestone 3: **Field Trials**	• Field-trial performance report (cycle testing, safety testing, thermal data, load tests) • Quality certification/validation from an accredited lab (if applicable) • Field Test: User/partner feedback report from field deployment	20%

- Funds released in tranches based on milestones
- Monitoring performance to evaluate the set targets and their achievement.

G. Performance Security

1 The Manufacturer shall, within 21 (twenty-one) days of the Effective Date, provide to the TrEST Research Park a performance security in the form of an unconditional and irrevocable bank guarantee from a scheduled commercial bank in India for an amount equal to 5% (five percent) of the total quoted price (the "Performance Security").

2 The Performance Security shall be valid until 90 (ninety) days after the expiry of the term of this Agreement or the completion of all obligations of the Manufacturer under this Agreement, whichever is later.

3 The Performance Security shall be returned to the manufacturer within 30 (thirty) days of the expiry of the validity period specified in Clause 6.2, subject to the manufacturer having fulfilled all its obligations under this Agreement.

4 The TrEST Research Park shall have the right to invoke the Performance Security, in whole or in part, in the event of:

(a) failure of the manufacturer to perform its obligations under this Agreement;

(b) any material breach of this Agreement by the manufacturer;

(c) termination of this Agreement due to the manufacturer's default; or

(d) any other circumstance which entitles the CLIENT to compensation from the manufacturer under this Agreement.

5 The TrEST Research Park shall, prior to invoking the Performance Security, notify the manufacturer in writing of its intention to do so, providing the manufacturer with a reasonable opportunity to cure the default or take remedial action, unless the circumstances require immediate invocation of the Performance Security.

H. Insurance and Taxes

1) The Manufacturer shall maintain necessary insurance against loss osf materials/-cash, etc., and workman disability compensation claims arising from injury, including death of the personnel deployed as well as third party claims from the date of taking over of the building of the TTPL/ site to the date of till the completion of the obligations of the Manufacturer under this agreement. The premium for all insurances shall be paid by the Manufacturer, and the proof of such policies shall be provided to TrEST Research Park. The policies shall be kept alive until the completion of the entire period and any extension thereof.

2) The Manufacturer shall pay all duties, taxes and other fees and levies payable under this agreement.

I. Mandatory Operation Period

The Selected Bidder shall strictly adhere to the timelines prescribed for the establishment, commissioning, and operationalization of the Pilot Production Facility. The Selected

Bidder shall ensure continuous operation of the Pilot Production Facility for a minimum period of ten (10) years from the date of commencement of production, and continue with the agreement constituted by the TTPL unless otherwise approved by TTPL in writing. The Premature exit, suspension, or non-operation shall attract penalties equivalent to:

- Uncovered portion of Government's 20% investment;
- 12 month's average royalty/revenue share;
- INR 2 Crore compensation for technology disclosure and opportunity loss.

In case of a Consortium or Joint Venture, all members shall be jointly and severally liable for performance of obligations under the Agreement, with the Lead Member bearing primary responsibility

J. Quality Control & Compliance (Refer RFP, Section 5.3)

1. Manufacturer shall comply with AIS, BIS, and other national/international norms.
2. TrEST retains right to inspect facilities, equipment, and records.
3. Failure to maintain quality may result in suspension of license and/or termination.

K. Reporting Requirements

Manufacturer shall submit:

- Monthly progress updates
- Quarterly technical and commercial reports
- Annual audited statements
- Field trial performance reports
- Incident and safety reports when applicable

L. Tenure, Renewal & Exit (Refer RFP, Section 8.10)

1. Initial binding tenure is 10 years.
2. Extensions to be mutually agreed.
3. Early exit constitutes breach unless approved by TrEST.

M. Termination

The Agreement may be terminated if:

1. Technology misuse or unauthorised transfer occurs.
2. Milestones are not achieved within mutually agreed timelines.
3. Safety or quality violations occur repeatedly.
4. Fraudulent information or misrepresentation is identified.
5. Government grant is misused.
6. Operations are abandoned before completion of 10 years.

On termination:

- IP access is revoked.
- Misused funds shall be recovered.
- Assets acquired by Manufacturer remain their property unless otherwise agreed.

N. Confidentiality

Manufacturer shall:

1. Protect confidential documents, designs, data, and process details.
2. Not disclose or reproduce any proprietary technology without written approval.
3. Ensure all employees sign confidentiality undertakings.

O. Indemnity & Liability

The Manufacturer shall indemnify TrEST/EV Consortium against:

- IP violations
- Safety breaches
- Regulatory non-compliance
- Environmental and operational liabilities

P. Force Majeur

Neither Party shall be liable for failure or delay in performance due to Force Majeure events, including acts of God, natural disasters, war, epidemic, government restrictions, or changes in law. The affected Party shall notify the other Party promptly, and timelines shall stand extended to the extent of such Force Majeure.

Q. Dispute Resolution (Refer RFP, Section 9.3)

1. Disputes shall first be resolved through mutual discussion.
2. Courts of Thiruvananthapuram shall have exclusive jurisdiction.

R. Notice

All official communications shall be sent to:

- TrEST Research Park: trestpark@kerala.gov.in
- Manufacturer: _____

S. Miscellaneous

1. Entire Agreement: This Agreement, together with the Annexures, constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior agreements, understandings, and negotiations, whether written or oral, between the Parties with respect to the subject matter hereof.
2. Amendments: This Agreement may be amended or modified only by a written instrument executed by both Parties.
3. Waiver: No waiver by either Party of any breach of this Agreement shall be considered as a waiver of any subsequent breach of the same or any other provision. No failure or delay by a Party in exercising any right, power, or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power, or privilege.
4. Severability: If any provision of this Agreement is held to be invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, and such provision shall be

deemed to be restated to reflect the original intentions of the Parties as nearly as possible in accordance with Applicable Law.

5. Assignment: Neither Party shall assign, transfer, or otherwise dispose of any of its rights or obligations under this Agreement without the prior written consent of the other Party, except that the CLIENT may assign its rights and obligations under this Agreement to any government entity that succeeds to the CLIENT's functions and responsibilities.

6. Relationship of Parties: Nothing in this Agreement shall be construed to create a partnership, joint venture, employment relationship, or agency relationship between the Parties. Neither Party shall have the authority to bind the other Party or to incur any obligation on behalf of the other Party.

7. Notices: All notices, requests, consents, claims, demands, waivers, and other communications under this Agreement shall be in writing and shall be deemed to have been given:

    a. When delivered by hand (with written confirmation of receipt);

    b. When received by the addressee if sent by a nationally recognized overnight courier (receipt requested);

    c. On the date sent by email (with confirmation of transmission)if sent during Normal business hours of the recipient, and on the next business day if sent after normal business hours of the recipient; or

    d. On the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE SET THEIR HANDS ON THE DATE FIRST ABOVE WRITTEN

T. Signature

For TrEST Research Park

Name: _____

Designation: _____

Signature: _____

For Manufacturer

Name: _____

Designation: _____

Signature: _____

WITNESSES:

1)

2)

Annexure A1: Miscellaneous

A1 **Entire Agreement**: This Agreement, together with the Annexures, constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior agreements, understandings, and negotiations, whether written or oral, between the Parties with respect to the subject matter hereof.

A2 **Amendments**: This Agreement may be amended or modified only by a written instrument executed by both Parties.

A3 **Waiver**: No waiver by either Party of any breach of this Agreement shall be considered as a waiver of any subsequent breach of the same or any other provision. No failure or delay by a Party in exercising any right, power, or privilege under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power, or privilege.

A4 **Severability**: If any provision of this Agreement is held to be invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, and such provision shall be deemed to be restated to reflect the original intentions of the Parties as nearly as possible in accordance with Applicable Law.

A5 **Assignment**: Neither Party shall assign, transfer, or otherwise dispose of any of its rights or obligations under this Agreement without the prior written consent of the other Party, except that the CLIENT may assign its rights and obligations under this Agreement to any government entity that succeeds to the CLIENT's functions and responsibilities.

A6 **Relationship of Parties**: Nothing in this Agreement shall be construed to create a partnership, joint venture, employment relationship, or agency relationship between the Parties. Neither Party shall have the authority to bind the other Party or to incur any obligation on behalf of the other Party.

A7 **Notices**: All notices, requests, consents, claims, demands, waivers, and other communications under this Agreement shall be in writing and shall be deemed to have been given:

(a) when delivered by hand (with written confirmation of receipt);

(b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested);

(c) on the date sent by email (with confirmation of transmission) if sent during

normal business hours of the recipient, and on the next business day if sent after normal business hours of the recipient; or

(d) on the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid.

Annexure A2: Formate for Perfonce Bank Guarantee

[On the letterhead of the Bank]
Bank Guarantee No. _____
Date: _____
To,
The Chief Executive Officer
Trivandrum Engineering Science & Technology (TrEST) Research Park
TC-4/2322, GEM Building, Opp. College of Engineering Trivandrum
Kulathoor Rd, Sreekariyam, Trivandrum, Kerala-695016

WHEREAS _____ (Name and address of the manufacturer) (hereinafter called "the manufacturer") has undertaken, in pursuance of Agreement No. _____ dated _____ to provide consultancy services for preparation of Conceptual Master Plan and Detailed Project Report (DPR) for setting up of Electric Vehicle Research and Industrial Park (Kerala EV Industrial Park) (hereinafter called "the Agreement");

AND WHEREAS it has been stipulated by you in the said Agreement that the manufacturer shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the manufacturer's performance obligations in accordance with the Agreement;

AND WHEREAS we have agreed to give the manufacturer a guarantee;

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the manufacturer, up to a total of INR _____ (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the manufacturer to be in default under the Agreement and without cavil or argument, any sum or sums within the limits of INR _____ (Amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____, 20 _____
.

Signature and Seal of the Guarantors

Date:

Address:

Annexure A3: Reference to RFP Document

This Agreement incorporates by reference the Request for Proposal (RFP) issued for the selection of manufacturing companies/startups in advanced pilot production and commercialization, including resource mobilization and marketing of LTO EV battery cells and packs, leveraging proprietary technologies developed by members of the Kerala EV Consortium. Operations will commence at Travancore Titanium Products Ltd. (TTPL).

The RFP document, including all its annexures and appendices, shall be read as part of this Agreement. In case of any inconsistency between the RFP and this Agreement, the provisions of this Agreement shall prevail.

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