Request for Proposal (RFP)
Future Battery Technology Consultant

Institute for Essential Services Reform
Tebet Timur Raya No. 48b
Jakarta Selatan
Indonesia
21 Mei 2025

1. BACKGROUND AND PROJECT SUMMARY

Indonesia's National Electricity Plan (RUKN) 2024–2026 projects 443 GW of installed capacity by 2060, with 41.6% from Viable Renewable Energy (VRE). As VRE capacity increases, ensuring power sector reliability through expanding energy storage becomes critical. Additionally, electrification of transport would also accelerate which constitutes potential demand for battery technology. The Draft National Energy Policy (RPP KEN) already targets 178 million EVs by 2060, while RUKN sets a battery energy storage storage goal of 18 GW. Alternatively for a more ambitious energy transition scenario, IESR estimates a higher capacity of battery that up to 300 GW may be needed by 2045 and all road transport electrified by 2050 to meet the 1.5°C climate target.

With the huge potential demand for battery technology in the next few decades, establishing local capacity and supply chain for the technology would be critical to lower the cost and optimize economic benefit for Indonesia. The battery supply chain ecosystem can be categorized into three main segments: upstream, midstream, and downstream. However, the development of the battery supply chain ecosystem across these segments is significantly influenced by the declining cost of battery manufacturing, driven by continuous technological innovation and advancement and evolution of the battery chemistry.

BloombergNEF reports that the price of lithium-ion batteries has dropped to USD 139 per kilowatt-hour as of 2023. Despite this positive trend, several structural challenges remain. Notably, Indonesia currently lacks an operational battery recycling system, limiting the circularity and sustainability of its battery ecosystem. Moreover, there is a disconnect between Indonesia's substantial nickel reserves, accounting for approximately 48% of global production, and the configuration of its electric vehicle (EV) supply chain. While Indonesia holds strong potential to develop a nickel-rich NMC (Nickel Manganese Cobalt) battery industry, most Original Equipment Manufacturer (OEM) facilities serving the domestic EV market are based in China, favoring the assembly of LFP (Lithium Iron Phosphate) batteries. This misalignment presents a strategic challenge for optimizing Indonesia's domestic value creation in the battery sectors.

Given the aforementioned opportunities and challenges, the Institute for Essential Services Reform (IESR) is undertaking a study to develop a comprehensive understanding of current state of the art battery technology and future trends as well as Indonesia's potential capacity to establish its own industrial ecosystem and supply chain.

2. SCOPE OF WORK AND DELIVERABLES

The findings from the study will inform the formulation of an advocacy strategy of IESR aimed at supporting the establishment of a sustainable and competitive battery supply chain in Indonesia.

The selected consultant is expected to deliver a comprehensive report on the assessment for future battery technology and Indonesia current position for RnD and innovation for each of the potential battery technologies. The scope of the report would include the following:

1. A comprehensive analysis of global trends and future projections in battery research and development of the expanding applications of battery technologies across various sectors,

including but not limited to Electric Vehicles (EVs), Battery Energy Storage Systems (BESS), and other relevant industries, covering:
   - Current technological advancements.
   - Emerging and next-generation battery technologies
   - Future application and suitability with the specific battery technology.
2. Assessment of Indonesia's domestic capacity to support battery technology advancement by evaluating:
   - Mineral composition relevant to battery future development and production.
   - Mapping of stakeholders on the battery technological advancement
   - Assessment of available initiatives on battery technology development
3. Evaluation of Indonesia's technological readiness to adopt and keep pace for each future battery innovations.
4. Analysis of the cost of battery technology (per specific application of per capacity) on the global level and within the Indonesian context (estimated if Indonesia is to adopt)
5. Synthesize findings in written reports to provide a clear understanding of Indonesia's position in the evolving global battery landscape and identify potential opportunities and challenges for Indonesia's future growth in the battery sector.

The interim report could be in the PPT format, with the final deliverable in both PPT and Word documents supported with visuals.

With this RFP, IESR is soliciting proposals from consultants with extensive experience and portfolios in developing complex and thorough future battery technologies assessment. IESR will evaluate all the proposals submitted. After reviewing all proposals, IESR will select the consultants that bring suitable expertise, most closely align with project objectives, and articulate a clear, achievable research plan to meet those objectives within the required timeframe.

3. PROPOSAL GUIDELINES

Proposal will be accepted **until 12:00 PM Indonesian Western Standard Time (WIB, GMT+7) on May 30, 2025**. Any proposals received after this date and time will be regarded as inadmissible. All proposals submitted must be signed by an official agent or representative of the company submitting the proposal. Upon receipt of the proposal, IESR will evaluate all the proposals and if clarification is required, a meeting may be held during the evaluation process before the winner is announced.

The main proposals should not be more than 10 pages in length excluding the annex, and should cover following items;

1. Cover letter
2. The value proposition of your expertise/institution/company
3. A contextual overview of the RFP
4. Methodology (e.g. plan to obtain data and information)
5. Project Timeline
6. Project Management (team organization, man hour details, and proposed budget)
7. Annex
   Should include the following item:

a. Brief company/institution/experts profile
b. The latest Curriculum Vitae (CV) of the team leader. CV of other team members with relevant experience is optional.
c. Provide 2-3 examples of previous projects that are similar in scope of nature.

Terms and conditions:

If the individual/organization submitting a proposal must outsource or contract any work to meet the requirements, this must be clearly stated in the proposal. Additionally, costs included in proposals must include any outsourced or contracted work. Any outsourcing or contracting organization must be named and described in the proposal. Please itemize all costs and include a description of associated services. Contract terms and conditions will be negotiated upon the selection of the winning bidder of this RFP.

4. REQUEST FOR PROPOSAL AND PROJECT TIMELINE

Proposal timeline:

- Proposal will be accepted until **12:00 PM** Indonesian Western Standard (WIB, GMT+7) on **May 30, 2025**. Kindly send all the necessary information to the Energy System Transformation Program of IESR.
- The evaluation of proposals will be conducted when the bidders submit their proposal until **June 4, 2025**. Follow-up with the top three candidates will be conducted within this time window to obtain any necessary clarification on items described within the proposals.
- The selection decision for the winning bidder will be made by **June 5, 2025.**

Upon notification, the contract negotiation with the winning bidder will begin immediately and must proceed quickly to meet the project timeline.

Project timeline:

The research must be commenced on **June 9, 2025** and the results of the project must be finalized no later than **August 1, 2025**.

A draft timeline is presented below. Internal changes may be made if mutually agreed upon;

Deliverables and/or Milestones	Timeline	Payment
Deadline for the proposal submission	*May 30, 2025*	
Clarification meeting between IESR and potential consultants	*June 2 - June 4, 2025*	
Winner announcement	*June 5, 2025*	
Project Kick-off	*June 9, 2025*	
Deliverable 1 & 2 development and reporting	*June 10 - June 20*	
Progress meeting 1	*June 23*	*30%*
Deliverables 3 & 4 development and reporting	*June 24 - July 4*	
Progress meeting 2	*July 7*	
Deliverables 5 development and reporting	*July 8 - July 15*	

Progress meeting 3	*July 16*	*40%*
Development of final report	*July 17 - July 25*	
Final report presentation	*July 28*	
Final report and handover	*Aug 1*	*30%*

5. BUDGET

All proposals must include proposed costs (in Indonesian Rupiah/IDR) to complete the tasks described in the project scope. Costs should be stated as one-time or non-recurring costs (NRC). A more detailed proposal is encouraged to ease the selection process. The budget ceiling for this proposal is **IDR160.000.000** for all costs required through the study **including** tax.

NOTE: All costs and fees must be clearly described in each proposal and should be separated into each item and scope of work.

6. BIDDER QUALIFICATIONS

Bidders should provide the following items as part of their proposal:

- A description of experience in battery research and development technology and analysis for similar technology related landscapes in Indonesia is advantageous,
- Examples of two or more similar projects conducted by you/your organization,
- Anticipated resources you will assign to this project (total number, role, title, experience),
- Confirmation of timeframe for completion of the project, and
- A brief description of the methodology and assumptions used, if applicable.

Bidders must submit a digital copy of their proposal via email to Program Manager Energy System Transformation at deon@iesr.or.id and cc to auzora@iesr.or.id and faris@iesr.or.id. by **12:00 p.m**. Indonesian Western Standard Time (WIB, GMT+7) on **Tuesday, May 30, 2025,** Please include “RFP Response – Future Battery Technology Consultant” in the subject line.