



Request for Proposal (RFP)
Consultant for Preliminary Feasibility Study for
Solar PV, Wind, and Energy Storage

Institute for Essential Services Reform

Tebet Timur Raya No.48B, Tebet

Jakarta Selatan

Indonesia

5 June 2024



OVERVIEW AND BACKGROUND

Institute for Essential Services Reform (IESR), a think tank based in Jakarta, Indonesia, has been working intensively to promote the acceleration of low carbon energy transition in Indonesia, through evidence-based policy advocacy. For the past 5 years, IESR also has been contributing significantly to promoting energy transition discourse in Indonesia and has been working with national and local governments, associations, and civil society organizations.

IESR is currently conducting technical assistance to provide detailed and comprehensive input regarding JETP priority projects that are not yet in the RUPTL or provide input on the list of new projects outside of the potential mentioned in the RUPTL and JETP. Several projects on our proposal plan consist of one site solar PV, and one site of a Wind Turbine Power plant which has a capacity generation minimum 100 MW. Additionally, two pre-feasibility study will be conducted for the energy storage project.

This request for proposal is to obtain the best services available to provide IESR with the preliminary survey of the selected locations and installation of measurement instruments.

1. PROJECT SUMMARY

This project will focus on three things:

1. Conducting satellite-based surveys to the pre-determined areas in Kalimantan and Sulawesi. Based on the survey, propose **three location candidates for each power plant**. Activity should include:
 - a. Provides the latest land use, landform, aerial imagery, and other needed maps in project development sites located in Kalimantan and Sulawesi
 - b. Support the preliminary location analysis using secondary data (GIS, etc)
 - c. Conducts surveys on the earth's surface, underground, and underwater (lake) to determine the best location to install new floating or ground-mounted PV, wind power plants, and energy storage with minimal direction/instructions on the assignments and utilizing their own survey instruments and provide recommendations for the final location.
2. Pre-Feasibility Study for the potential and selected locations (selected locations based on the survey results after consultation with IESR and/or stakeholder discussion) which include floating or ground-mounted PV, Wind and Energy Storage with specification as below:
 - A. **Technical aspect**
 - Solar PV Power Plant**

One potential location for a solar power plant will be going to the Pre-FS stage and it should calculate the following technical item:

 - a. Preliminary system design using HelioScope or other software, using industry/market standards for main component (PV modules and inverter);
 - b. Capacity sizing recommendation/optimization for around 100 MWac FPV per site;
 - c. Annual energy yield assessment using PVSyst or similar software;

Wind Power Plant

Based on the pre-assessment, we are going to select one potential wind power plant site into a pre-feasibility study. The consultant will do analysis and report for pre-FS of the locations based on standard Pre-FS document requirements and/or SNI. The assessment must include:



- a. Capacity calculation (based on preliminary micro-sitting);
- b. Recommended high-resolution wind characteristic data providers (two or three different sources);
- c. Annual energy production calculation using wind flow modeling simulation;

Energy Storage

This project aims to identify the two types of energy storage that are highly recommended to assess the nearest location of the Solar and Wind projects. The type of Energy Storage should consist of

1. Sea Water Pump Energy Storage
2. Co-location energy storage near the project. The storage can be Battery Offriver Pump Hydro Energy Storage (PHES), Energy Storage System (BESS), Compressed-Air Energy Storage (CAES), Thermal Energy Storage

The analysis of Energy storage must include the following information:

- a. Distance to the nearest sub-station;
- b. Possible land clearance detailed areas for building reservoirs and/or infrastructures
- c. Other detailed land conditions (e.g. water-to-rock ratio);
- d. Energy Storage design;
- e. Capacity and generation calculation; and energy storage operation profile

B. Commercial aspects:

Besides the technical aspect, the pre-feasibility study must include the financial analysis for each side.

- a. Project economics (financial analysis) using PVSyst or similar software, with several output parameters (i.e., LCOE, PPA price, IRR, NPV, etc.); including
 - b. Providing cost and financing input assumptions (e.g., CAPEX, OPEX, development cost, land cost, interest rates, etc.) to perform the analysis
3. Disseminate the survey result in one day workshop with IESR stakeholders (MEMR, PLN, Bappenas)
- a. Arrange workshop material based on the activities, methodology, and result to present in the workshop for all technology; and
 - b. Create Pre-FS instruction guidelines for solar, wind power plant, and energy storage projects.

All of the projects must not be associated with the already identified JETP project list, RUPTL list, or ongoing/Pipeline Development Project from any third party. It is expected that the result of the pre-FS could be an addition to the identified project listed above. The format of the Pre-FS document must follow PLN and/or SNI standard.

With this RFP, IESR is soliciting proposals from experts, or institutions with extensive experience and portfolios in conducting surveys for renewable energy resources. IESR will evaluate all the proposals submitted. After reviewing all proposals, IESR will select the experts/institutions 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.

2. PROPOSAL GUIDELINES

Main proposals should not be more than 10 pages in length. The annex of the proposal should include the following items:

- 1) brief company/institution profile.
- 2) the latest Curriculum Vitae (CV) of the team leader. CV of other team members with relevant



experience is optional.

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, service fee and taxes. 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 selection of the winning bidder for this RFP.

3. PROJECT PURPOSE AND DESCRIPTION

IESR would like to have a summary of proposed locations that have been surveyed based on the pre-assessment areas that IESR has identified. IESR plans to develop pre-FS of the wind power plant, solar PV, and energy storage further in the proposed locations. The chosen partner will conduct a survey on the pre-selected area and together with IESR finalize the 4 location which will continue to the Pre-Feasibility Study

Expected deliverables from these exercises are:

- From the pre-assessment, we are going to focus on studying Kalimantan and Sulawesi as the project locations. We identify that Solar PV will be located in Kalimantan and Wind Power Plant will be in Sulawesi, while the two of energy storage will be determined based on the potential co-location with previous projects and landscape.
- Support IESR to conduct workshop and dissemination of the project to IESR stakeholder (PLN, ESDM, Bappenas, PUPR, Local Government, etc)

The study results will be used to support IESR's advocacy agenda to the stakeholders. IESR reserves the right to utilize and own the data and paid-off equipment part of this project that mentioned on the proposal. .

4. REQUEST FOR PROPOSAL AND PROJECT TIMELINE

Proposal Timeline:

Proposals will be accepted until 10:00 p.m. Indonesian Western Standard Time (WIB, GMT+7) on Sunday, 23 June 2024. Any proposals received after this date and time will be regarded as inadmissible. All proposals must be signed by an official agent or company representative submitting the proposal. Kindly address Program Manager Energy Transformation IESR at deon@iesr.or.id, Research Manager at raditya@iesr.or.id, Program Officer Energy Transformation rahmat@iesr.or.id for inquiries. Please include **"RFP Response – Prefeasibility Study Consultant"** in the subject line

Evaluation of proposals will be conducted from **23 June through 25 June 2024**. Follow-up with the top three candidates will be conducted within this window to obtain any necessary clarification on items described within the proposals.

The selection decision for the winning bidder will be made by **26 June 2024**.

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

Project Timeline:



The project must commence on 21 June 2024 and the results of the project must be finalized no later than 15 October 2024.

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

Activity/Deliverables	Suggested Timeline
<i>Initial/preliminary survey via secondary data (GIS)</i>	26 June - 5 July
<i>Compiling Data and Listing the potential location candidates at least 3 candidate each technology</i>	8 - 15 July
<i>Select the most suitable candidates based on the criteria</i>	16 - 25 July
<i>Develop survey plan, inquiries, and data form</i>	25 - 31 July
<i>Survey to the locations and do coordination with the local stakeholder, cross check the current landscape, development planned and others.</i>	5 - 10 August
<i>Progress report to IESR team</i>	18 - 20 August
<i>Financial Analysts</i>	21 - 31 August
<i>Progress report to IESR</i>	1-5 September
<i>Final pre-FS document</i>	6 - 20 September
<i>One day workshop with IESR Stakeholder on Pre-FS</i>	15 October

Unless otherwise noted, work will be completed by the end of the month identified above.

IESR team will supervise the project, some revisions and feedback will be given and consultant must perform the adjustments according to the contract

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).

Expected cost to be included in the proposal:

- Man-hours or man-day to cover the survey works and pre-FS activities
- Transportation and accommodation needed for surveys (only for consultant needs)
- Services charges and taxes

6. BIDDER QUALIFICATIONS

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

- Description of experience in land use or project surveys as well as experience working in a multi-disciplinary consultancy (5 years experience)
- Good IT skills in commonly used software, such as GIS software, Helioscope, Windpro, other credible software
- Examples of three or more similar projects conducted by you/your organization
- Anticipated resources you will assign to this project (total number, role, title, experience)
- Confirmation of the timeframe for completion of the project
- Brief description of how you will meet the deliverables within the allocated time