



**Request for Proposal (RFP)  
Review and Revisit of Provincial-Level Energy Plan  
(RUED)**

**Institute for Essential Services Reform**

Jl. Tebet Barat Dalam VIII No. 20A-B

Jakarta Selatan

Indonesia

17 June 2022



## 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 promote energy transition discourse in Indonesia and has been working with national and local governments, associations, and civil society organizations to strengthen clean energy deployment in Indonesia.

Indonesia has ratified its commitment to the Paris Agreement through law no. 16/2016. As part of the mitigation action, Indonesia will increase its renewable energy development in accordance with National Energy Policy and Planning (*Kebijakan Energi Nasional/KEN* and *Rencana Umum Energi Nasional/RUEN*). According to the policy framework, Indonesia must achieve a 23% renewable energy share in 2025 from the total energy mix which is double the current renewable energy mix (11.2% at the end of 2021). To achieve these targets, the national government mandates each local government at the provincial level to prepare a Provincial Energy Plan (RUED). However, to comply with the Paris Agreement target, higher renewables penetration might be needed and therefore developed in this short span of time.

As the reference to creating RUED-P, the existing RUEN was developed in 2017 using real data collected up until 2015 for several indicators such as socio-economic, energy, and environmental status. These data then were projected until 2050 by considering the existing and future policies at the time. However, looking at real data of these indicators until early 2022, it is clear there are discrepancies between the projected data in RUEN and the actual development. Additionally, there are a number of policy developments between 2017-2022 that could significantly change the country's energy landscape and future development. As an example, given the massive renewable resources the country has, Indonesia has the potential to realize a more ambitious renewable energy mix target in its both RUEN and RUED. A roadmap to such an ambitious target must be supported by a robust provincial energy plan to direct the energy market development in the right direction.

To provide fact-based advocacy for reviewing the existing RUED for Central Java and Jambi province and projecting how does the current technological advances and policy development (both global and local) affect the country's energy system future development, IESR will conduct a review and revisit of provincial-level energy modeling using LEAP (Low Emission Analysis Platform) or other optimization methods suitable for the work. At the same time, building the IESR team's capacity for modeling energy plans would be needed to support future study and advocacy work.

### 1. PROJECT SUMMARY

The project would conduct a review and revisit of RUED for **Central Java and Jambi Province**. This project will focus on three main deliverables:

If using LEAP:

1. Design and provide a LEAP model capable of producing similar results to the current RUED model for the years 2022-2050. The model should have all the key assumptions in the main tree of LEAP (key assumptions, demand, transformation, and resources) as described in RUED. The model shall also consider the existing and upcoming technology and policy development in the energy sector such as energy efficiency measures, electric vehicles,



hydrogen, synthetic fuels, etc. The scenarios used in the model are subjects to discuss with the IESR team and should consist of a minimum of three scenarios.

2. Write a narrative report summarizing the findings and analysis comparing the three different scenarios in the LEAP model.
3. Hand over model LEAP to IESR team through workshop sessions on the following topics:
  - a. Produced LEAP model in the first deliverable
  - b. NEMO (Next Energy Modeling system for Optimization) or other tools used for optimization

If using other optimization methods: similar scopes on assumption and technologies, report and hand-over.

The scenarios used in the first deliverable are subjects to discussion with IESR team and would include at the very least the following three scenarios:

- a. Business as Usual scenario (considering the current macroeconomic indicators, demographic and development until the year 2021/2022)
- b. Moderate scenario. The scenario would also be optimized based on cost of technologies
- c. Net Zero Emission (NZE) by 2050 or sooner if possible. The scenario would also be optimized based on cost of energy, and emission target to reflect the Paris Agreement compliance.

With this RFP, IESR is soliciting proposals from experts, or institutions with extensive experience and portfolios in energy system modeling. IESR will evaluate all the proposals submitted. Following review of all proposals, IESR will select the experts/institutions that bring suitable expertise, most closely aligns with project objectives, and articulates a clear, achievable research plan to meet those objectives within the required timeframe.

## **2. PROPOSAL GUIDELINES**

Proposals will be accepted until 11:00 p.m. Indonesian Western Standard Time (WIB, GMT+0700) on Monday, 4 July 2022. Any proposals received after this date and time will be regarded as inadmissible. All proposals must be signed by an official agent or representative of the company submitting the proposal.

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

- 1) brief company/institution/experts 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. 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 for this RFP.

### 3. PROJECT PURPOSE AND DESCRIPTION

IESR would like to conduct a review and revisit of RUED for two provinces in Indonesia. The model built will be able to reproduce the current RUED results and be able to simulate the Indonesia energy system that considers existing and future technological developments that could enable Indonesia to meet the Paris Agreement target. These technological developments would include energy efficiency measures, electric vehicles, hydrogen, storage technology, electrification of industrial equipment, etc. There would at least be three scenarios simulated in the model consisting of:

- a. Business as Usual scenario  
An updated version of the current provincial energy plan used in the previous RUED but with more recent data that also considers the impact of COVID-19 to the macroeconomic indicators used in the model.
- b. Moderate renewables scenario  
The scenario will be like the first scenario but with higher renewable energy supporting a policy that would enable Indonesia to meet a higher renewable energy mix than currently stated in RUED. Further, the scenario would be optimized based on the least cost constraint. The optimization could use the NEMO or other proposed tool.
- c. Net Zero Emission by 2050 scenario (and/or sooner)  
A scenario where the energy development plan is evolving with the purpose of meeting the Paris Agreement target which will see a decline in carbon emission of the energy system before 2030 and moving toward net-zero carbon by 2050. Further, the scenario would be optimized based on the least cost constraint. The optimization could use the NEMO or other proposed tools.

IESR team would provide input to the scenario development (especially the second and third scenarios). All the model and data (tree, branch, data, and assumptions) collected within the project timeframe would be handed over to the IESR team.

The minimum data, report, and model to be transferred to the IESR team are:

- Key assumptions data and its sources.  
The historical data and projection used for the key assumptions should consist of primary and secondary data which are collected from credible sources.
- Demand, transformation, and resources data  
The historical data and projection used for the demand, transformation, and resources data shall use Indonesian-specific secondary data.
- Assumptions and other data used, including the GHG emission and cost of technology  
Assumptions could be made and should always be noted wherever the specific Indonesian data is unavailable (i.e., hydrogen, synthetic fuel, coal gasification data, technology cost etc.). Please provide the methodology used whenever adapting the non-Indonesian-specific data to the model.
- LEAP model (or other model based on chosen optimization method) for Indonesia energy system with at least three scenarios already built.

The chosen partner shall also prepare a narrative report analyzing the LEAP/other model results and comparing the three scenarios which will be handed over to the IESR team together with the model. The minimum information to be included in the narrative report are

- Model structure and methodology
- Summary of data sources and assumptions used



- An analysis comparing the three scenarios in the LEAP/other models on at least the following: energy mix, technology, GHG emission, and cost (energy system cost)

To further enable the IESR team to do its advocacy work, the chosen partner would also provide capacity building sessions. The sessions would be designed with the purpose of transferring the knowledge about the built provincial energy model and allowing the participating IESR team to do further analysis and development with the model.

The model, and report results will be used to support IESR's advocacy work with relevant energy sector stakeholders, including the national government, local government, and private sector.

#### 4. REQUEST FOR PROPOSAL AND PROJECT TIMELINE

##### Proposal Timeline:

Proposals will be accepted until 11:00 p.m. Indonesian Western Standard Time (WIB, GMT+0700), 4 July 2022. Kindly address Program Manager Sustainable Energy Access IESR at [citra@iesr.or.id](mailto:citra@iesr.or.id) and cc [icmi@iesr.or.id](mailto:icmi@iesr.or.id) for inquiries.

Evaluation of proposals will be conducted from 4 July through 8 July 2022. 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 8 July 2022**.

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

##### Project Timeline:

Project kick-off will be conducted on 12 July 2022 and the results of the project must be finalized no later than 31 October 2022.

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

Activity	Expected Timeline
Project kick-off	12 July 2022
Discussion with IESR team on scenarios	8 - 12 July 2022
Collecting data for the key assumptions and sources	12 July – 31 August 2022
Building the LEAP/other models	01 September – 14 October 2022
Preliminary report & presentation	17 October 2022
Revision	18 October - 28 October 2022
Results presentation, report & model handover to IESR team	31 October 2022

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



## 5. BUDGET

All proposals must include proposed costs (in Indonesian Rupiah/IDR) to complete the tasks described in the project scope and detailed activities including focus group discussions, cost and travel, when necessary. Costs should be stated as one-time or non-recurring costs (NRC).

NOTE: All costs and fees must be clearly described in each proposal.

## 6. BIDDER QUALIFICATIONS

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

- Description of experience in LEAP and energy system modeling (experience in Indonesia energy system modeling would be beneficial)
- 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 timeframe for completion of the project
- Brief description on methodology and assumptions used

Bidders must submit a digital copy of their proposal via email to Program Manager Sustainable Energy Access IESR at [citra@iesr.or.id](mailto:citra@iesr.or.id) and cc to [icmi@iesr.or.id](mailto:icmi@iesr.or.id) by 11:00 p.m. Indonesian Western Standard Time (WIB, GMT +0700) on **4 July 2022**. Please include "RFP Response – RUED Review" in the subject line.