



Request for Proposal (RFP)

**Expert Modeler for Indonesia's Net-Zero
Industrial Roadmap Aligned
with the 1.5°C Paris Agreement Target**

Institute for Essential Services Reform

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1. OVERVIEW AND BACKGROUND

Since signing the Paris Agreement in 2016, Indonesia has actively engaged in international climate diplomacy, committing to reduce greenhouse gas emissions by 31.89% unconditionally, and up to 43.2% conditionally compared to 2010 levels (Indonesia's Enhanced Nationally Determined Contribution, ENDC). The energy sector is expected to contribute 12.5% of these reductions, with the waste sector, IPPU, and agriculture & FOLU sectors contributing 1.4%, 0.2%, and 17.7% respectively. In the new update, it is expected that the second ENDC will align to the Long-Term Low Carbon and Climate Resilience Strategy (LTS-LCCR) 2050 that vision Indonesia to reach net-zero by 2060 or sooner. Nevertheless, it has been revealed that the existing and upcoming plans, whether conditional or unconditional, are far from what Indonesia should have achieved based on the 1.5°C warming limit of the Paris Agreement. According to the Climate Transparency Report, current pathways could result in a 4°C temperature increase by 2060.

As Indonesia embarks on a new national planning called Indonesia Emas 2045, there are changes in terms of economic growth as well as emission reduction targets stated in the document of Long Term National Planning (RPJPN) 2025-2045. It has been declared that the government aims for robust economic growth—targeting a gross national income of USD 30,300 by 2045—and expects the manufacturing and maritime sectors to increase their GDP contributions to 28% and 15% respectively. Concurrently, Indonesia targets a 93.5% reduction in emissions by 2045 compared to 2025 levels.

The Ministry of Industry, as the lead technical ministry that governs industrial sectors' operation, addresses this dual challenge by starting development of a net zero emission industry roadmap that considers the economic and emission reduction targets, strengthening the emission reporting regulation, developing green industry standards, as well as preparing the framework for market driven decarbonization. However, these efforts remain in the planning phase and require accelerated implementation.

IESR sees continuous monitoring on decarbonization progress by the industrial sector as key to ensure its achievement towards net zero and ensuring its competitiveness in the global market. The industry players' past, ongoing and future initiatives and pipeline projects are often overlooked to be calculated in the planning stages of national roadmap development. Hence, IESR is currently inviting experts to help assess the industry sector's business-as-usual emission baseline following the new economic target in Indonesia Emas 2045 and 8% growth at the end of Prabowo's presidency in 2029, as well as to develop a results-focused decarbonization action plan based on proven technologies to help decision making process by policymakers.

2. SCOPE OF WORK

This project will focus on four things:

Deliverables	Weight
1. Characterize Indonesia's manufacturing industry by identifying sector types, their typical energy consumption, and associated greenhouse gas emissions to determine which industries contribute the highest total and intensity-specific emissions.	10%
2. Assess emissions from nine priority industries by evaluating existing decarbonization initiatives, relevant national policies, energy transition plans, and economic development targets. This includes establishing the scope 1 and 2 emission baseline for 2023/2024 and projecting emission trajectories under multiple scenarios up to 2050 and 2060.	60%
3. Analyze system and infrastructure requirements necessary to support the industrial transition to net-zero emissions, such as renewable electricity integration, energy storage capacity, clean fuel and low-carbon material supply chains, and the associated investment needs through 2050 and 2060.	20%
4. Analyze the socio-economic impact of decarbonization including changes on employment and health and wellbeing of people and environment	10%

The expected outcome from the consultant is to provide a model and its associated database and final report to IESR as a basis for future studies and engagement for accelerating industry decarbonization in Indonesia. For each outcome, we expect the consultant to provide minimum the following items.

1. Model and its associated database

Consultant is expected to share all modelling results and should dedicate 2-3 times model workshops to IESR. The model is expected to illustrate the:

- Scope 1 and 2 emission baselines for 2023/2024,
- Emission trajectory forecasting under multiple scenarios (preferably 1.5°C and least-cost optimization) up to 2050 and 2060, and
- Enabling conditions for industry decarbonization to be met in 2050 and 2060 and its impact on socio-economic aspects.

Minimum database that is expected to be shared

- Typical energy consumption and associated greenhouse gas (GHG) emissions for each industry subsector, and



b. Modelling assumptions on technology adoption rate, cost, and other relevant data.

2. Final report

The detailed final report should include:

- a. Methodology and assumptions used in the analysis,
- b. Findings from the industry emission characterization (for example in form of sankey diagram)
- c. Emission projections and scenario analysis.
- d. Analysis of system and infrastructure needs.
- e. Socio-economic impact assessment.
- f. Recommendations and conclusions.
- g. References and supporting documentation.

With this RFP, IESR solicits proposals from a set of experts or institutions with extensive experience and portfolios in energy, industry and climate modelling. IESR will evaluate all the proposals submitted. Following a review of all proposals, IESR will select a set of 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.

3. DELIVERABLES & TIMELINE

The selected consultant is expected to kick off the study on June 10, 2025 and to finish the study no later than August 29, 2025.

A draft timeline is presented below with internal changes may be made if mutually agreed. As stated, IESR expects the consultant to provide a database, model and final report. To ensure the quality, the report is expected to be submitted in three stages; progress report for manufacturing industry characterization and baseline emission, emission growth and mitigation scenarios, and sensitivity analysis on system and infrastructure needs and socio-economic impact. Each of these documents is considered a living document throughout the study and must be consolidated into a comprehensive final report at the end of the project. Biweekly or weekly meetings are encouraged during all stages to support alignment and ensure timely feedback.

Deliverables	June			July					August			
	W2	W3	W4	W1	W2	W3	W4	W5	W1	W2	W3	W4
Study kick off												
Progress report on manufacturing industry characterization and baseline emission												

Progress report on emission growth and mitigation scenarios												
Progress report on sensitivity analysis on system and infrastructure needs and socio-economic impact												
Final Report and Presentation												

4. CONSULTANT QUALIFICATIONS

The firm consultant should have the following expertise:

- Minimum of 5 year-experience in energy, industry and climate modelling and analysis (preferably focuses in Indonesia or similar developing economies).
- Strong knowledge of energy transition and net zero policies relevant to industrial sectors in Indonesia.
- Proven ability to develop strategic emission mitigation recommendations based on proven technologies, cost and technology readiness.
- Experience in writing reports and publications in similar topics.

5. PROPOSAL GUIDELINES

All the bidding participants will expect to propose their proposals and required documents as part of IESR's commitment to encouraging openness and accountability in the bidding process, as follows:

A. Proposal

The main proposals should not be more than 15 pages in length and should detail the approach and methodology the bidder will use throughout the study. The annex of the proposal should include the following item:

1. Brief expert/company/institution profile,
2. The latest Curriculum Vitae (CV) of the team leader. CV of other team members with relevant experience is optional,
3. Relevant portfolio in conducting similar work or in a similar field

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 describe the limitations and assumptions potentially used in the work.
- Please itemize all costs and include a description of associated services. Contract terms and conditions will be negotiated upon selection of the winning bidder.



B. Budget Proposal

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 cost is encouraged to ease the selection process.

C. Mandatory required documents

- a. Statement Letter of Compliance with Pre-Qualification Provisions
- b. Statement Letter of Not Involvement in Prohibited Organizations
- c. Statement Letter of Not Claiming Compensation
- d. Business Entity Qualification Form
- e. Statement Letter Not Under Court Supervision
- f. Expression of Interest
- g. Statement of Willingness to Deploy Personnel and Equipment
- h. Statement of Overall Commitment
- i. Field Capability Statement Letter
- j. Statement of Authenticity of the Document
- k. Integrity Pact

All required documents can be downloaded through this link (<http://bit.ly/4kt4uf1>) and the proposal submissions will be expected to be received until **22:00 Indonesian Western Standard Time** (WIB, GMT+0700) on **Wednesday, June 4 2025**, and should be addressed to faricha@iesr.or.id (Industrial Decarbonization Coordinator for Technology and Policy, IESR) with cc to: juniko@iesr.or.id (Industrial Decarbonization Manager IESR) and dhifan@iesr.or.id (Energy Research Analyst IESR). Please include **“RFP Expert Modeler for Indonesia’s Net-Zero Industrial Roadmap Aligned with the 1.5°C Paris Agreement Target”** in the email subject line. All proposals must be submitted by an official organization or a designated representative of the organization.

Any proposals received after this date and time will be regarded as inadmissible. Evaluation of proposals will be conducted within a week after the deadline. 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 **June 9, 2025**.

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