Request for Proposal (RFP)

Consultant for

Study on Green Hydrogen in Industry: Roadmap for Technology and Ecosystem Development

RFP No.	**1649/IESR/XII/PM-GETI/ADM-RFP/2025**
Issue date	**December 19th 2025**
Proposal due date and time	**January 4th 2026, 23.59**
Anticipated Award Date	**January 15th 2026**
Contact Person/Department	**Rheza Hanif Risqianto rheza@iesr.or.id** **Green Energy Transition Indonesia**

Institute for Essential Services Reform

Tebet Timur Dalam Raya No.109D, Tebet

Jakarta Selatan

Indonesia

19 December 2025

Consultant for

Green Hydrogen in Industry: Technology Roadmap and Supporting Ecosystem

1. Introduction and Executive Summary

1.1 Purpose of the RFP

Indonesia possesses vast renewable energy potential, positioning the country to become a major producer of green hydrogen. As a clean energy carrier, green hydrogen can play a critical role in decarbonizing hard-to-abate sectors such as industry and heavy transport, improving energy security, and enabling greater integration of renewables through its function as a flexible load and energy storage medium. Furthermore, it presents opportunities to expand access to clean energy in remote areas.

Indonesia's industrial sector already relies on hydrogen today, especially in refineries and fertilizer production, and it also plays a role in supplying hydrogen through existing gas and energy companies. This positions industry as both a current user and a future driver of demand. Hydrogen functions as a key feedstock in several industrial processes and also has the potential to serve as an alternative fuel for high-temperature operations that are difficult to electrify. As demand for low-carbon hydrogen is expected to grow in the coming decades, production capacity will need to expand to ensure the continues supply, supported by improvements in infrastructure such as pipelines, storage, and distribution systems. Strengthening both supply and infrastructure will be essential for Indonesia to build a hydrogen ecosystem capable of meeting its long-term industrial needs.

IESR is seeking qualified experts and organizations to support scale deployment of hydrogen technologies in supporting industrial decarbonization. The study will identify how hydrogen contribute importantly for industrial decarbonization, evaluate production capacity and technologies for Indonesia, and outline the development direction needed to build a competitive hydrogen supply system. Findings will be a reference for national planning and clarify hydrogen's appropriate role within Indonesia's broader industrial transition.

1.2 Background of the Procuring Entity

The Institute for Essential Services Reform (IESR) is an Indonesian think tank focused on energy and environmental issues, driving the transition to a low-carbon energy system through evidence-based policy advocacy and rigorous scientific research. Founded in 2007, IESR evolved from earlier civil society efforts advocating for electricity sector reform and has since become a key driver of Indonesia's transition toward a clean, just, and low-carbon energy system. Headquartered in Jakarta, IESR envisions a world that is better, more sustainable, low-carbon oriented, and able to provide clean, sustainable energy for future generations.

IESR's mission is to encourage the acceleration of Indonesia's energy transition towards a just, clean, and

low-carbon energy system. The organization operates at the intersection of research, policy advocacy, public engagement, and capacity development, working collaboratively with government institutions, civil society organizations, academia, and private sector actors. IESR actively produces data-driven policy recommendations and high-impact research to guide national energy planning and decision-making, particularly as Indonesia seeks to meet its climate targets and net-zero commitments.

In pursuit of its goals, IESR engages in a wide range of activities. These include the Green Energy Transition Indonesia (GETI) project, which aims to strengthen the enabling conditions for the rapid deployment of green electricity and green hydrogen in the country. Through GETI, IESR works to expand access to inclusive, reliable, and affordable low-carbon energy while creating an environment that encourages increased investment in renewable energy projects. As part of this initiative, the GETI project is opening a Request for Proposal (RFP) for a Research Consultant to collaborate in achieving its goals.

1.3 Project Overview/Scope Summary

The study evaluates hydrogen's potential role in Indonesia's industrial sector by assessing future demand, sectoral transition pathways, infrastructure readiness, and production options. Its purpose is to provide a evidence-based foundation for strategic planning, ensuring hydrogen is deployed where it offers meaningful economic and environmental value. Consultants will work collaboratively with IESR team in building the report. Further information regarding the Scope will be provided in **Section 2.2**.

1.4 Key Dates and Milestones

The project must commence in the **2nd week of January 2026**, and the results of the project must be finalized no later than **4th week of March 2026** as presented below. To track progress, it is suggested to have **weekly meetings** between IESR and consultants. Moreover, consultants could provide a suggested timeline for completing the project as long as it is still within the period mentioned previously.

Activity/Deliverables	Description	Suggested Timeline	Payment Term
Kick off meeting of the project		**W2 January 2026**	
Inception Report	Outline detailed methodology, work plan, and preliminary desk research.	W3 January 2025	
	Updated insights covering Scope 1 and 2.	W2 February 2025	
Progress meeting 1 – Term 1		**W2 February 2025**	**30%**
Progress Report 1	Updated insights on Scope 3 and 4, and draft covering Scope 1, 2, 3 and 4.	W4 February 2025	
Progress meeting 2		**W4 February 2025**	
Progress Report 2	Updated insights and draft outputs covering Scope 5 and 6.	W2 March 2025	
Progress meeting 3 – Term 2		**W2 March 2025**	**40%**
Preliminary Report	A draft version of the full report.	W3 March 2025	
Finalization meeting of final report		**W4 March 2025**	
Final report and Handover – Term 3		**W4 March 2025**	**30%***

**Final payment is subject to acceptance and approval of the final report.*

The IESR team will be involved in supervision of the project and writing of the report, with some revisions and feedback given for the consultant to perform adjustments according to the contract.

2. Scope of Work and Deliverables

2.1 Project Description

The consultant is expected to support the IESR team in conducting analytical studies to develop Indonesia's Green Hydrogen Industry Roadmap to support national industrial decarbonization.

The main **objectives** of this study are outlined below.

1. To assess Indonesia's future industrial demand for hydrogen.
2. To identify the industrial subsectors with the strongest potential for hydrogen adoption through the economic, environmental, and strategic assessment of technological pathways.

3. To develop transition pathways that can guide key industrial subsectors in shifting toward hydrogen use, and to evaluate the economic, environmental, and strategic benefits associated with these pathways.
4. To examine the readiness of Indonesia's gas industry and existing infrastructure for hydrogen deployment, and to determine the actions required to support hydrogen distribution at scale.
5. To assess Indonesia's capacity to establish a competitive domestic electrolyzer manufacturing ecosystem.
6. To define the direction for hydrogen industry development in Indonesia, with the aim of ensuring a reliable, scalable, and long-term supply for industrial consumers.

2.2 Specific Services/Products Required

In this project, the consultant will be responsible for delivering the full research and preparing the final report. Certain components will be carried out by the IESR team (*); consultants should structure their proposals accordingly to reflect this division of work. The scope of work outlined below may be refined as needed to ensure the study's objectives are fully achieved.

1. Introduction

- Compile a concise global and regional overview of the hydrogen economy,
    - Relevance and importance for industrial decarbonization.
    - Major market trends, especially for the industrial subsectors.
    - Major hydrogen technological trends, especially in applications in the industrial subsectors.
- Define the study's objectives, questions, boundaries, and assumptions.
- Describe the methodological approach:
    - Data collection,
    - Sector assessments,
    - Scenario design,
    - Modelling frameworks, or
    - Stakeholder interviews.

2. **Indonesia's Industrial Transition Pathway**

- Identify potential subsectors based on:
    - Conduct detailed technology assessment for identified subsectors (pre-screening hydrogen applications).
        - Process requirements, technological constraints, supply constraints, availability of economically viable non-hydrogen technologies.*
        - Most important transition technologies (for decarbonization), including hydrogen-based, and electrification-based / CCUS-based / bio-based.
        - ESG pressure in terms of exports.

- Conduct detailed transition roadmaps assessment with key milestones on hydrogen technology adoption stages.

- Provide CAPEX / OPEX / fuel / other costs implications leading to a levelized cost comparison.
- Provide TRL comparison.
- Provide carbon reduction (emissions reduction and sensitivity analysis based on carbon pricing).
- Provide possible operational changes due to technology transition: material subtitution, manufacturing process, site layout, and workforce skills, etc.
- Provide risks and mitigation: technical, operation, skill constraints, safety concerns, etc.

- Consolidate all findings into an integrated narrative as a basis for industrial hydrogen demand assessment.

3. Indonesia Industrial Hydrogen Demand

- Develop hydrogen demand projections by sector across multiple timeframes considering scenarios such as:*
  - Baseline
  - IESR Scenario
  - Ministry of Industry
- Develop a mapping of existing and future industrial clusters or zones and analyze its potential to act as hydrogen hubs.*
- Develop an industrial hydrogen demand map with geospatial overlays of demand centers, potential supply nodes, and infrastructure corridors.*
- Consolidate all findings into an integrated narrative.

4. Indonesia Industrial Hydrogen Production Technologies and Infrastructure Readiness

- Review hydrogen production technologies (SMR+CCS, ATR+CCS, alkaline electrolysis, PEM, SOEC, etc) and their readiness, costs, and suitability for Indonesia.*
- Review of distribution and storage technologies that can be futher developed for supplying industrial networks.
- Assess blending feasibility and limits in Indonesian gas networks (material constraints, safety thresholds, economics). Outline required safety standards, regulatory frameworks, permitting processes, and institutional responsibilities.
- Consolidate all findings into an integrated narrative.

5. Production Roadmap for Gas Companies

- Present a phased roadmap (near-term, mid-term, long-term).
  - Production capacity expansion pathways.
  - Outline investment needs, partnership models, financing strategies, and priority regions for early deployment.
- Design Hydrogen Hub concepts including spatial demand, production, storage, distribution, and co-located industrial off-takers (with study case).*
- Model storage and distribution buildout options: dedicated pipelines, converted pipelines, trucking networks, maritime routes (with study case).*

6. **Electrolyzer Manufacturing Capacity in Indonesia**
    - Summarize the current global electrolyzer landscape, including technology types, manufacturing capacity, and major producers, and compare it with projected global capacity demand.
    - Disaggregate electrolyzer systems into key components and balance-of-plant elements to identify the associated material requirements.
    - Conduct cost and indigenisation mapping to determine which materials can be competitively manufactured in Indonesia and which are more viable to import.
    - Evaluate opportunities within Indonesia's mineral supply chain, both for domestic electrolyzer development and for potential export markets.

7. **Conclusion**
    - Summarize the technology pathway for each industrial sector, structured as a unified hydrogen-in-industry roadmap.
    - Summarize the manufacturing technology pathway and the development roadmap for establishing electrolyzer manufacturing capabilities in Indonesia.
    - Deliver cross-cutting strategic actions for policymakers, regulators, and industry, including market design, incentives, and permitting/standard reforms.
    - Recommend workforce development needs for gas companies and industrial sectors transitioning to hydrogen.

To effectively carry out this scope of work, the required qualifications for the consulting team are as follows:

1. Led by a PhD in energy systems, industrial decarbonization, engineering, economics, or related fields (a Master's degree with substantial relevant experience may also be considered).
2. A minimum of 5 years of experience for a PhD (or 8 years for a Master's degree) in related fields.
3. Demonstrated experience in sectoral or techno-economic assessments, including modelling of industrial energy decarbonization or transition pathways.
4. Familiarity with hydrogen technologies and energy transition frameworks.
5. Proven experience in stakeholder engagement and institutional coordination.
6. Working proficiency in English and Bahasa Indonesia.

This opportunity is open to **independent consultants** (with a supporting team) and **consulting firms** based in Indonesia. Candidates not currently hold ongoing contracts with IESR are preferred. Moreover, the project is generally open to the methodology proposal proposed by the consultant, which will be deeply discussed at the beginning of the study.

2.3 Deliverables and Milestones

The consultant is expected to submit the following deliverables throughout the course of the study.

2.3.1 Interim Deliverables

To ensure quality control and track progress, the following interim deliverables are expected:

1. **Inception Report**

Submitted after the kick-off meeting, this report should outline the study methodology, work plan, timeline, and key points of coordination.

2. **Brief Biweekly Report**
   Short biweekly progress notes will be submitted to summarize ongoing activities, findings to date, challenges encountered, mitigation strategies employed, and upcoming tasks. These updates are intended to maintain transparency, facilitate coordination with IESR and external stakeholders, and ensure adaptive management of the study process.
3. **Progress Report 1**
   A presentation slide deck summarizing preliminary findings and updates covering Scope 1, 2, 3, and 4, to be presented during the first progress meeting.
4. **Progress Report 2**
   A second presentation slide deck capturing updated insights and draft outputs covering Scope 5 and 6 to be presented during the second progress meeting.
5. **Preliminary Report**
   A draft version of the full report, complete analysis, and complete structure for feedback before finalization.

2.3.2 Final Deliverables

At the end of the project, the consultant must submit:

1. **Database of Collected Information**
   A structured and organized dataset or spreadsheet compiling key data and references gathered throughout the study.
2. **Final Report**
   (Written in English; Maximum 80 pages, w/o appendix; Including executive summary, maximum 4 pages)
   A final report covering all components of the scope of work, structured into the following recommended sections (may evolve or change along the study, all covered by consultant):
   a. Executive Summary
   b. Introduction
      - Hydrogen economy context
      - The role of hydrogen in industrial sector decarbonization
      - Overview of objectives, methodology, and scope
   c. Sector-by-Sector Transition Pathways
      - Refining
      - Ammonia
      - Methanol
      - Iron and Steel
      - Other Chemicals
      - Other High Temperature Heating
      - Export Opportunities
   d. Indonesia's Industrial Hydrogen Demand
      - Hard-to-electrify sectors

- Industrial clusters and Hydrogen Hub
- Projected demand and supply for hydrogen
- Industrial Hydrogen Demand Map

e. Infrastructure Readiness and Production Technology
- Hydrogen production technology
- Hydrogen production facilities
- Current gas infrastructure
- Hydrogen blending feasibility and limits
- Storage, compression, and distribution requirements
- Safety frameworks and regulatory alignment

f. Electrolyzer Industry Assessment and Development in Indonesia
- Global Electrolyzer Landscape and Capacity Outlook
- Electrolyzer System Breakdown and Material Requirements
- Cost Assessment and Indigenisation Potential
- Mineral Supply Chain Opportunities

g. Production Roadmap for Gas Companies
- Production Capacity Development
- Hydrogen Hub Development
- Storage and Distribution Development

h. Conclusion
- Hydrogen in industry: detailed technology roadmap
- Electrolyzer Manufacturing Technology Pathway
- Strategic Actions: Policy, Market Design, and Workforce Development

The report should use APA 7th edition referencing, with a complete reference list included at the end.

3. Proposal Requirements and Submission Instructions

3.1 General Requirements

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

3.1.1 Proposals

Bidding participants have to submit no more than 40 pages of a proposal package, which consists of a technical proposal (background, task to be conducted, methodology, schedule), and a detailed cost proposal. The proposal outlines are further explained in **Section 3.1.3.**

The annex of the proposal should include the following items:

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

3.1.2 Mandatory Requirements

Bidding participants are required to submit the following mandatory documents along with their proposal, as listed below.

1. Statement Letter of Compliance with Pre-Qualification Provisions
2. Statement Letter of Not Involvement in Prohibited Organizations
3. Statement Letter of Not Claiming Compensation
4. Business Entity Qualification Form
5. Statement Letter Not Under Court Supervision
6. Expression of Interest
7. Statement of Willingness to Deploy Personnel and Equipment
8. Statement of Overall Commitment
9. Field Capability Statement Letter
10. Statement of Authenticity of the Document
11. Integrity Pact

All required documents mentioned above can be downloaded through this link (s.id/documentsrfpcommsiesr).

3.2 Proposal Content Outline

All bidding participants are expected to submit a comprehensive proposal. While the overall structure may be determined by the bidders, the proposal must, at a minimum, include the following components.

1. Executive Summary
2. Company Profile
3. Understanding of the Project: Scope of Work
4. Proposed Solution: Detailed approach, methodology, and proposed
5. Project Plan/Timeline
6. Team and Resources
7. Experience and References
8. Pricing Proposal
9. Assumptions and Dependencies
10. Risk Management Plan
11. Appendices: Supporting documents (resumes, certifications, relevant portfolio, etc.)

3.3 Pricing Proposal Requirement

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. The budget ceiling for this proposal is **IDR 200,000,000** for all costs required during the study period (including tax).

3.4 Submission

All required documents are expected to be received to IESR before 23:59 p.m. Indonesian Western Standard Time (WIB, GMT+7) on **Sunday, January 4th 2026**. Bidders must submit a digital copy of their proposal via email to erina@iesr.or.id and cc to rheza@iesr.or.id, dhifan@iesr.or.id, vicky@iesr.or.id, and deasy@iesr.or.id. Please include **"RFP Response – Green Hydrogen in Industry: Technology Roadmap and Supporting Ecosystem"** in the subject line.

Contract negotiations with the winning bidder will commence immediately after selection.

3.5 Late Submissions

Any proposals received after the submission date and time will be regarded as inadmissible. The late proposal submission will be considered if the RFP submission deadline is extended.

4. Evaluation Criteria and Selection Process

4.1 Evaluation Committee

To ensure fairness and objectivity, an Evaluation Committee will be appointed to review all proposals. All members will be confirmed to have no affiliation or conflict of interest with any participating bidders. Each member will evaluate and score submissions independently before proceeding to subsequent stages or determining the final results.

Staff Name	Position in IESR	Role in Evaluator Team
Erina Mursanti	Project Manager - Green Energy Transition Indonesia (GETI)	Project Supervisor
Rheza Hanif Risqianto	Green Energy and Hydrogen Analyst	Proposal Evaluator
Muhammad Dhifan Nabighdazweda	Energy Research Analyst	Proposal Evaluator
Vicky Firmansyah	Energy System Modeller	Proposal Evaluator

4.2 Evaluation Criteria

All proposals received will be reviewed and assessed by the Evaluation Committee using a set of criteria designed to ensure alignment with the objectives of this RFP. The following criteria and weight will guide the assessment process.

1. **Organizational Capacity and Relevant Experience**
   The proposer has demonstrated the capability to deliver the required services, including a track record of relevant past performance, understanding of the local context, and successful delivery of projects of comparable scope and complexity. Reference to the value of previous relevant projects is encouraged.
   - Organization's technical capacity, expertise, and experience for requested service

types/fields (10%).

- Experience in conducting services in the requested locations (understanding local context where the project is being executed) (5%).
- The highest contract value ever completed relative to the expected service value of the RFP (5%).
- Organization performance in past work with IESR (5%).

2. **Technical Approach and Methodology**
   Clarity, suitability, and completeness of the proposed approach to achieving the objectives of the RFP, including methodology, work plan, timeline, and any added value or innovative concepts that may go beyond the stated requirements.
   - Clear understanding of the required services as described in the proposal (5%).
   - Clear description of the methodology proposed to meet the RFP objective (5%).
   - Suitability of the proposed methodology for answering the RFP requirement (10%).
   - Transparent work allocation and timeline to complete the tasks (5%).
   - Additional value or idea proposed on top of the RFP requirement (5%).

3. **Team Qualifications**
   The relevant experience, expertise, and educational background of key personnel proposed for the assignment.
   - Team members experience level (10%).
   - Team member education level (10%).

4. **Cost-Effectiveness**
   The extent to which the proposed cost is reasonable and competitive concerning the quality, scope, and level of expertise offered.
   - Proposed contract value against estimated service value (25%).

4.3 Evaluation Process

The evaluation process will be done by the evaluation committee as staged: Initial screening to check the bidding proposal completeness, detailed review and scoring based on the evaluation criteria mentioned previously, shortlisting three top candidates, clarification meetings, reference checks and final selection, and award decision/winner results.

4.4 Award Decision

The submitted proposals will be evaluated by the committee based on the criteria and stages outlined above. If necessary, the committee may request a clarification meeting with shortlisted bidders following the initial assessment. Upon completion of the evaluation process, the selected bidder and the evaluation results will be announced on the IESR website and communicated directly via email to all participating bidders. The decision for the winning bidder is aimed to be made by **Thursday, January 15, 2026**.

5. Terms and Conditions

These terms and conditions apply to the RFP and selection process, with further details for project

execution to be included in the final contract.

5.1 Standard and Contract Terms

- If the individual or organization submitting a proposal intends to outsource or subcontract any part of the work to meet the requirements of this RFP, this must be clearly stated in the proposal.
- Proposals must include the costs for any outsourced or subcontracted work, and the name, background, and scope of work of the subcontracting organization(s) must be provided.
- Please describe any limitations, assumptions, or dependencies that may affect the work.
- Proposals must be submitted according to the timeline stated in this RFP. Any proposals received after the deadline may not be considered.
- The scope of work described in the final contract will reflect the agreed deliverables during the project.
- If there are changes to the proposal during the evaluation process (e.g., scope adjustments, resource changes, revised pricing), these must be submitted in writing and agreed upon before the contract is finalized.
- If the selected bidder is unable to deliver the agreed work and withdraws before the project begins, the procuring entity reserves the right to select an alternative bidder.
- If unforeseen circumstances prevent the winning bidder from providing required materials or services during the project, the bidder must notify the procuring entity immediately to determine next steps.
- Final contract terms and conditions will be negotiated upon selection of the winning bidder.

5.2 Confidentiality and Proprietary Information

- All information in this RFP and any materials shared during the evaluation process should be treated as confidential.
- Information provided during the evaluation process should only be used for preparing and submitting your proposal and not for any other purpose, unless you have prior written consent from the procuring entity.
- Any notes, drafts, or discussions (verbal or written) created or received in connection with your proposal should be handled as confidential.

5.3 Right to Reject/Modify

The procuring entity reserves the right to reject any or all proposals, waive any informalities in the procurement process, and enter into negotiations with selected bidders as deemed in its best interest.

5.4 Disclaimers

The procuring entity is under no obligation to award a contract as a result of this RFP and will not be responsible for any costs incurred in the preparation or submission of proposals. The selected bidder and the evaluation results will be announced on the IESR website and communicated directly via email to all participating bidders.

5.5 Governing Law

The project agreement will be governed by and constructed in accordance with the laws of the Republic of Indonesia.

5.6 Amendments

Any changes, updates, or clarifications to this RFP will be issued as formal written addenda and distributed to all listed bidders. This ensures that all bidders receive the same information, maintaining transparency and fairness in the RFP process.

6. Inquiries and Communications

6.1 Questions and Clarifications

All questions regarding this RFP must be submitted in writing via the mentioned emails on **Section 3.4** with the email subject **"RFP Inquiry – Green Hydrogen in Industry: Technology Roadmap and Supporting Ecosystem"**. Verbal inquiries will not be accepted.

6.2 Addenda/Amendments

Any changes, updates, or clarifications to this RFP will be issued as formal written addenda and distributed to all listed bidders.

7. Acknowledgement

Reviewed and Approved by:

Erina Mursanti
Project Manager
Green Energy Transition Indonesia (GETI) IESR