Request for Proposal (RFP)

Research Consultant for

Study on Potential and Techno-Economic Analysis for Green Hydrogen Production in East Nusa Tenggara

RFP No.	**1528/IESR/XI/PM-GETI/ADM-RFP/2025**
Issue date	**November 13th 2025**
Proposal due date and time	**November 23rd 2025, 23.59**
Anticipated Award Date	**December 4th 2025**
Contact Person/Department	**Rheza Hanif Risqianto rheza@iesr.or.id** **Green Energy Transition Indonesia**

Institute for Essential Services Reform

Tebet Timur Raya No.48B, Tebet

Jakarta Selatan

Indonesia

13 November 2025

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1. Introduction and Executive Summary

1.1 Purpose of the RFP

Indonesia holds vast renewable energy potential, positioning the country to potentially 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.

Recognizing this opportunity, the government has taken initial steps toward developing a national hydrogen ecosystem. The publication of National Hydrogen Strategy and Roadmap reflects growing institutional interest, while several ministries, state-owned enterprises, and private actors have launched feasibility studies, pilot projects, and international collaborations. These early initiatives mark a critical foundation for Indonesia's emerging hydrogen economy.

Developing hydrogen hubs is essential to accelerate this growth, as they integrate renewable resources, infrastructure, and end-use industries within regional clusters. Among potential regions, East Nusa Tenggara (NTT) stands out due to its abundant solar and wind resources, which are projected to yield the highest hydrogen production potential and the lowest production costs by 2040 (MEMR, 2023). NTT also presents strong domestic hydrogen utilization prospects across the energy, industrial, maritime, and household sectors, alongside opportunities to position hydrogen as an export commodity.

To address this need, the Institute for Essential Services Reform (IESR) seeks to engage qualified experts to support a dedicated study on green hydrogen development in East Nusa Tenggara. The study aims to assess potential of and techno-economic analysis for green hydrogen production and identify potential demand in the province, and to design strategies that can guide the region's hydrogen economy development while fostering inclusive and sustainable economic growth.

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 accelerate Indonesia just and equitable energy transition. The organization operates at the intersection of research, policy advocacy, public engagement, and capacity development, works

collaboratively with government institutions, civil society organizations, business, and academia. 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

IESR is seeking qualified experts or organizations to conduct a study on green hydrogen development in NTT. The research will evaluate the region's potential as a future hydrogen hub by assessing its renewable energy resources, hydrogen production and demand prospects, and strategic development pathways.

The study will examine technical, economic, and infrastructure factors supporting hydrogen production and use across key sectors including energy, industry, transport, and maritime, and identify opportunities for local utilization and export. It will also assess the potential economic benefits for the region and review enabling factors such as policy frameworks, investment readiness, and institutional collaboration.

The findings are expected to deliver strategic recommendations for advancing NTT's hydrogen economy, supporting sustainable regional growth and Indonesia's long-term energy transition.

1.4 Key Dates and Milestones

The project must commence in the **1st week of December 2025**, and the results of the project must be finalized no later than the **1st week of March 2026** as presented below. To track progress, it is suggested to have biweekly meetings between IESR and consultants. However, consultants could provide a suggested timeline for completing the project as long as it is still in the period mentioned previously. Further information regarding the Scope will be provided in **Section 2.2**.

Activity/Deliverables	Description	Suggested Timeline	Payment Term
Kick off meeting of the project		**W1 December 2025**	
Inception Report	Outline detailed methodology, work plan, and preliminary desk research.	W2 December 2025	
Progress meeting 1		**W2 December 2025**	**30%**
Progress Report	Updated insights and draft outputs covering Scope 2, 3,4 and 5.	W4 January 2025	
Progress meeting 2		**W4 January 2026**	**40%**
Preliminary Report	Updated insights and draft outputs covering Scope 6 and 7. Draft version of the full report.	W3 February 2026	
Finalization meeting of final report		**W4 February 2026**	
Final report and Handover		**W1 March 2026**	**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 a study on the strategic role of NTT in advancing regional green hydrogen infrastructure. This study aims to ensure that the development of green hydrogen projects is more targeted, effective, and aligned with Indonesia's domestic potential and future needs. The objective of this study is to:

1. To analyze and conduct techno-economic analysis of the green hydrogen production potential (through electrolysis) in NTT based on their renewable energy (RE) potential.
2. To identify potential locations for developing hydrogen hubs, considering access to renewable energy sources and proximity to hydrogen markets/demand centers.
3. To estimate production capacity and infrastructure requirements to support the development of the green hydrogen supply chain in NTT.
4. To assess the economic and environmental aspects of the hydrogen economy.
5. To formulate strategic and actionable recommendations for developing green hydrogen hubs that effectively support economic growth in NTT.

2.2 Specific Services/Products Required

In this project, the consultant will undertake the following key tasks. The **scope of work** may be adjusted as necessary to ensure the study's objectives are fully met.

1. Develop an inception report prior to the study, outlining key components such as the introduction, research questions, methodology, research process/plan, and timeline.
2. Literature review and Context Setting
    a. Review national and international literature related to green hydrogen production technologies, applications, and supply chains.
    b. Examine Indonesia's hydrogen policy direction and national targets and its context for NTT.
    c. Identify existing hydrogen production facilities that supply the needs of NTT, including their locations, production capacities, and types of hydrogen produced.
3. Assessment of hydrogen production potential in NTT (*reproducing from IESR's data*).
    a. Map and assess the technical potential of renewable energy sources in NTT. The renewable energy considered in this study is solar (on-shore and floating), wind (on-shore and off-shore), and hydropower.
    b. Map and assess the availability of freshwater or alternative water sources for electrolysis processes.
    c. Estimate theoretical green hydrogen production (through electrolysis) capacity based on RE potential and water availability.
4. Assessment of hydrogen demand market in NTT (*reproducing from IESR's data*).
    a. Identify current and future demand for hydrogen (industrial, power sector, gas network, and transport) in NTT. Conduct sectoral and spatial analysis of hydrogen demand centers.
    b. Map domestic and international trading ports in NTT to analyze the export opportunities.
5. Assess the hydrogen potential to meet hydrogen demand in NTT and outside NTT's province.
    a. Analyze the spatial alignment of hydrogen supply and demand to identify feasible locations for hydrogen production facilities. Estimated focus hydrogen sites:
        i. Hybrid Power Plant (VRE + BESS + Hydrogen) for Diesel Power Plant Replacement (1-2 sites).
        ii. Hard-to-abate industries (1-2 sites).
        iii. Coal/gas power plant retrofitting (1-2 sites).
        iv. Sea transport (small boat - marine vessel) bunkering / refueling station (1-2 sites).
    b. Assess the required electrolyzer type and capacity to utilize this potential and estimate the corresponding water needs.
    c. Assess the required additional infrastructure require to use and/or transport hydrogen and/or hydrogen based-green fuel to demand centers.
    d. Estimate levelized cost of hydrogen (LCOH) for selected production sites.
    e. Identify potential locations for hydrogen production areas/clusters through proximity analysis to ports and industrial zones.
6. Assess the technical, environmental, and economic implications of the hydrogen economy.
    a. Evaluate infrastructure needs and associated costs for hydrogen handling, storage, and transportation, emphasizing inter-island transport or trade.

b. Assess the environmental implications of developing hydrogen sites, including impacts on carbon emissions/climate change, water resources, land use, etc.
c. Assess the economics benefits of the hydrogen economy for NTT growth, including potential impacts on employment, investment expansion, and income generation from hydrogen production and trade.

7. Recommendation for the hydrogen development in NTT
   a. Explore the regional, inter-island, and international market opportunities for hydrogen production in NTT.
   b. Recommend priority project sites and infrastructure planning steps.
   c. Identify enabling conditions and policy mechanisms to support market and investment readiness.
8. Complete all deliverables as specified in Section 2.3 of this document.

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

1. Led by a PhD degree in renewable energy, geoscience, geography, sustainable energy engineering, or relevant studies (Master's degree with extensive experience may also be considered).
2. A minimum of 3 years of experience for PhD (or 5 years for Master's degree) in related fields.
3. At least 2 years of professional experience in geospatial analysis using GIS software (e.g. ArcGIS, QGIS, etc.).
4. Demonstrated track record with renewable energy projects and/or economic estimation, and industrial development experiences.
5. Previous experience and knowledge in green hydrogen is preferrable.
6. Familiarity with the economy or social development in NTT region is an advantage.
7. Working proficiency in English and Bahasa Indonesia.
8. Legally permitted to work in Indonesia.

This opportunity is open to **independent consultants** (with a supporting team) and **consulting firms** based in Indonesia. Candidates not currently holding 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. All final outputs must be submitted in English, in an editable digital format, and professionally proofread.

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**
   A presentation slide deck summarizing preliminary findings and updates covering Scope 2, 3, 4, and 5 to be presented during the progress meeting.
4. **Preliminary Report**
   A draft version of the full report, including Scope 6 and 7, 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 maximum 4 pages executive summary)
   A final report covering all components of the scope of work, structured into the following recommended outline (may evolve or change along the study):
   a. Executive Summary
   b. Introduction
      - Background, objectives, methodology, and scope of work.
   c. Green Hydrogen Context
      - Green hydrogen supply chain, applications, and production technologies.
      - Indonesia's policy direction and national targets.
      - Hydrogen context for NTT.
   d. Hydrogen Production Potential in NTT
      - Technical potential.
      - Priority sites (with LCOH estimation).
   e. Hydrogen Demand Analysis
      - Sectoral and spatial outlook of hydrogen demand in NTT
      - Identification and mapping of key demand centers:
        - Hybrid Power Plant (VRE + BESS + Hydrogen)
        - Hard-to-abate industries
        - Coal/gas power plant retrofitting
        - Sea transport bunkering / refueling station
   f. Green hydrogen market potential for NTT
      - Clustering of hydrogen production sites and demand centers.
      - Export market potential.
      - Infrastructure and supply chain readiness, including for the other islands or international markets.
   g. Strategic Recommendations
      - Strategic regional market development in NTT, including recommended priority sites and hydrogen clusters with required infrastructure and enabling conditions.

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 3.2.**

The annex of the proposal should include the following items:

1. Brief expert/company/institution profile.
2. The latest Curriculum Vitae (CV) 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.

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, November 23, 2025**. Bidders must submit a digital copy of their proposal via email to erina@iesr.or.id and cc to rheza@iesr.or.id, alvin@iesr.or.id, afriza@iesr.or.id, and deasy@iesr.or.id.

Please include **"RFP Response – Study on Potential and Techno-Economic Analysis for Green Hydrogen Production in East Nusa Tenggara"** 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
Afriza Ni'matus Sa'adah	Renewable Energy and Energy Storage Program Analyst at IESR	Proposal Evaluator

Alvin Putra Sisdwinugraha	Power System and Renewable Energy Analyst	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, December 4, 2025**.

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 the 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 confidentially.
- 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 in **Section 3.4** with the email subject **"RFP Inquiry – Study on Potential and Techno-Economic Analysis for Green Hydrogen Production in East Nusa Tenggara"**. 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 by:	Approved by:
Signed by: Erina Mursanti A5D12E08-8AA9-4EAB-9222-7AE7C37551F8 **Erina Mursanti** Project Manager Green Energy Transition Indonesia (GETI) IESR	Signed by: Fabby Tumiwa 97647B0C-B3C4-4A10-A[illegible]1-8E8C43616838 **Fabby Tumiwa** Chief Executive Officer IESR