Request for Proposal (RFP)

Grid Connection Studies and Power Quality Analysis Nusa Penida

Jakarta, 7 January 2026

Institute for Essential Services Reform

Jl. Tebet Timur Dalam Raya No.109 B-D, Tebet, Jakarta Selatan

RFP Title	**Grid Connection Studies and Power Quality Analysis Nusa Penida**
RFP No.	**1691/IESR/XII/PM-SEA/SEA/2025**
Issue date	**January 7th, 2026**
Proposal due date and time	**Jan 21st, 2026 11.59 PM Western Indonesia Time (GMT+07)**
Anticipated Award Date	**Jan 26th, 2026**
Contact Person/Department	**Muhamad Yudistira Rahayu** **yudistira@iesr.or.id** **Head of Bali Net Zero Emission 2045**

1. BACKGROUND AND PROJECT SUMMARY

The Institute for Essential Services Reform (IESR) is a think tank that has consistently advocated for the acceleration of the low-carbon energy transition through rigorous research and policy advocacy. For more than two decades, IESR has made significant contributions to strengthening the national discourse on energy transition and has built extensive collaborations with central and local governments, industry associations, and civil society organizations to scale up the deployment of clean energy in Indonesia.

Since 2019, IESR has worked closely with the Provincial Government of Bali to accelerate the island's energy transition. In 2023, Bali adopted an ambitious vision to achieve Net Zero Emissions by 2045, supported by the Bali Clean Energy Coalition comprising IESR, WRI Indonesia, New Energy Nexus, CAST Foundation, and Azura Indonesia. Within the framework of this collaboration, IESR has completed a comprehensive analysis of the Nusa Penida power system, targeting the achievement of 100% renewable energy by 2030 and zero emissions for Bali by 2045.

The post-pandemic recovery and expansion of tourism activities in Bali have placed additional pressure on the electricity system, particularly due to rising demand from commercial sectors such as hotels, restaurants, and tourism facilities. The Nusa Penida electricity system covering Nusa Penida, Nusa Lembongan, and Nusa Ceningan Islands remains heavily reliant on diesel generation and constrained distribution networks. Under these conditions, PLN has been compelled to add diesel generation capacity as backup supply, while businesses are encouraged to operate self-owned generators. Furthermore, several feeders have approached load levels of 40–50% of transformer capacity, increasing the risk of system disturbances and highlighting limitations in network interconnection. Conversely, investor interest in the development of small- to medium-scale solar photovoltaic (PV) power plants including distributed rooftop PV installations on government buildings, commercial properties, and public facilities have shown a highly positive trend. In response to these dynamics, PLN, through ICON+, has begun developing a Virtual Power Plant (VPP) approach as a short-term solution to enhance supply capacity without constructing new conventional power plants.

According to the Nusa Penida 100% Renewable Energy 2030 Roadmap, strengthening the power grid and electricity system is essential to optimally accommodate the integration of renewable energy

generation. Accordingly, a comprehensive grid study is required to identify the capacity limits of the existing network and the necessary upgrades, optimize the absorption of distributed solar PV, and enhance the resilience and reliability of the Nusa Penida electricity system.

2. SCOPE OF WORK AND DELIVERABLES

2.1 Detailed Project Description:

IESR is looking for partners with extensive experience and portfolios, capable of carrying out a study on "Grid Connection Studies and Power Quality Analysis Nusa Penida".

Objectives:

- Analyze the grid connection of Nusa Penida, Nusa Lembongan, and Nusa Ceningan to assess the ability of the existing system to accommodate a significant increase in renewable energy penetration.
- Evaluate system readiness for large-scale integration of rooftop solar PV and utility-scale solar PV, in line with the Nusa Penida 100% Renewable Energy 2030 Roadmap issued by IESR.
- Identify technical constraints and bottlenecks within the existing grid that may limit renewable energy integration.
- Determine system reinforcement and upgrade requirements necessary to support higher levels of renewable energy penetration.
- Develop technology and policy solution options to enable the achievement of Nusa Penida's 100% renewable energy target by 2030.
- Ensure that all proposed solutions maintain system reliability, power quality, and secure operation of the electricity network.

2.2 Specific Services/Products Required:

The consultant should conduct the study within the following scope of work:

1. Technical hosting capacity assessment for rooftop solar PV and utility-scale solar PV at the feeder and transformer levels, taking into account constraint criteria such as voltage limits (under- and over-voltage), current and thermal loading, reverse power flow, and power quality parameters (e.g. flicker, harmonics, and related indicators).
2. System reliability and stability assessment under high renewable energy penetration scenarios, based on the Nusa Penida 100% Renewable Energy 2030 Roadmap and the *Rencana Usaha Penyediaan Tenaga Listrik* (RUPTL) 2025–2034. For high levels of solar PV penetration, the reliability analysis will address the impacts of PV generation variability, changes in daily load profiles, outage risks, and the requirements for advanced system control.
3. Technical evaluation of large-scale solar PV plus battery energy storage systems (PV+BESS) deployment within the Nusa Penida electricity system.
4. Priority-based grid reinforcement planning, including the deployment of smart inverters, conductor and transformer upgrades, remote monitoring systems, and other relevant grid modernization measures.
5. Recommendations for grid reinforcement and development, comprising a five-year roadmap to support the accelerated deployment of rooftop and utility-scale solar PV. This includes the integration of Virtual Power Plant (VPP) business models and PLN–private sector collaboration schemes, optimization of system operations in alignment with the RUPTL, and capacity

strengthening of the system operator.

6. Prepare a comprehensive report for the study.
7. Commit to conducting bi-weekly meeting and delivering weekly progress reports.

2.3 Deliverables and Milestones:

Expected duration of work: 98 days within January 2026 – May 2026 with details can be seen below.

No.	Deliverable	Timeline	Payment terms
1	Deadline for the proposal submission	21 January 2026	-
2	Proposal evaluation, (the process includes clarification meeting, if needed.	23 January 2026 after 12:00 WIB	-
3	Bid winner announcement	26 January 2026	-
4	Contracting finalization and project kick-off	28 January 2026	50% of the total project cost
5	Deliverable-1: technical hosting capacity assessment & system reliability and stability assessment	27 February 2026	
6	Deliverable-2: technical evaluation of large-scale solar PV + BESS & priority-based grid reinforcement planning	30 March 2026	
7	Deliverable-3: Roadmap and Recommendations for grid reinforcement and development & Final Report	4 May 2026	50% of the total project cost

The **final report** should be prepared in **Bahasa Indonesia and English**, including an **executive summary** in **Bahasa Indonesia and English**.

2.4 Performance Standards and Service Level Agreements (SLAs) (if applicable):

Category	Metric/Standard
Timeliness	All deliverables submitted within agreed deadlines
Technical quality (on-site)	The study must be carried out based on appropriate scientific principles, be transparent, and use accountable data. The approach or methodology used in completing the study must be clear, including the stages of collecting primary data and using secondary data.
Third parties involvement	If the consultant plans to involve third parties, including subcontractors, in completing this study, all plans and information related to third-party involvement must be consulted with and approved by the IESR.
Reporting, Data &	The report must be prepared comprehensively using the principles and

Compliance	rules of scientific writing.

2.5 Roles and Responsibilities:

Procuring Entity (IESR) Responsibilities:

- Receive and review the deliverables prepared by the consultant, including providing feedback if the deliverables do not meet the procuring entity's expectations.
- Work with the consultant to ensure that the timeline is implemented effectively and on time, including providing assistance in administration matters (such as cover letter, etc.) to conduct 1-on-1 interviews or focus group discussions with the relevant stakeholders who are the targets of this study.
- Provide compensation as agreed (in the consulting agreement) based on the deliverables and invoices submitted before the effective contract period ends.
- The procuring entity may reject or cancel a payment request made by the consultant if the deliverables and invoices are submitted after the effective contract period.

Successful Bidder Responsibilities

- Develop a detailed work plan to complete all deliverables within the agreed timelines.
- Conduct all deliverables in accordance with the scope of work, in a well-organized, dedicated, and responsible manner, adhering to established scientific principles and rules.
- Prepare a weekly report and a bi-weekly coordination meeting with IESR.
- Consultant is allowed to make adjustments to the approach and methodology in Grid Connection Studies and Power Quality Analysis Nusa Penida
- Prepare and submit the final report, including all data and information collected to complete this work, to IESR within the agreed timelines.
- The consultant may request payment from IESR, in accordance with the consultant agreement, after the deliverable is received in good order by IESR before the effective date of the contract termination.

3. PROPOSAL REQUIREMENTS AND SUBMISSION INSTRUCTIONS

3.1 General Instructions:

Item	Requirement
Language	Bahasa Indonesia (all sections, including annexes and supporting documents)
Font	Arial or Calibri, size 11
Line Spacing	1.15 spacing, single-sided
Margins	2.5 cm (1 inch) on all sides
Page Limit	Maximum 15 pages for the main proposal (excluding annexes and CVs)
File Format	PDF (for official submission); Excel for budget details
Number of Copies	1 electronic copy (via email or secure link); hard copy optional upon request
Submission Label	Email subject or file name should read: "RFP Response – Grid Connection

	Studies and Power Quality Analysis Nusa Penida [Organization Name]"
Proposal Validity Period	Proposals shall remain valid for 60 days from the deadline for the submission of proposal

3.2 Proposal Content Outline:

Follow this outline for the proposal:

- Executive Summary: A high-level overview of bidder's proposed solution.
- Company Profile: Background, experience, additional information on legal structure, financial stability.
- Understanding of the Project: How bidder interprets the RFP's requirements.
- Proposed Solution: Detailed approach, methodology, and proposed technology/tools.
- Project Plan/Timeline: Detailed work breakdown structure, key phases, and milestones.
- Team and Resources: Key personnel, their qualifications, and assigned roles.
- Experience and References: Relevant past projects, client testimonials, and contact information for references.
- Pricing Proposal: Detailed breakdown of costs (see 3.3).
- Assumptions and Dependencies: Any assumptions made.
- Risk Management Plan: How bidder plans to mitigate potential risks.
- Appendices: Supporting documents (resumes, certifications, etc.).

3.2.1 Qualification

- A company or organization with experience in conducting research related to renewable energy, power market, regulatory framework, decarbonization in power sector, environmental issues, or energy transition issues in Indonesia—including desk research and stakeholder engagement activities.
- Experience in collaborating with international and national stakeholders and institutes is highly desirable.
- A company or organization eligible to participate in this bidding must have a business permit in Indonesia, issued by the Indonesian government. If the company consists of experts from outside Indonesia (foreign nationals), the experts registered for this bidding process must have a work permit in Indonesia issued by the Indonesian government.
- Have a team composition that meets the requirements, but is not limited to, the following:
    1. Team leader (1 personnel):
        - Minimum Master's degree required in science, environment, engineering, renewable energy, or other relevant disciplines.
        - Minimum 10 years of experience in research or work related to energy transition, renewable energy, or decarbonization in the power sector.
        - Strong and comprehensive knowledge and experience in power system policy is preferred.
        - Experience in writing reports, white papers, or recommendations for national stakeholders.
        - Strong leadership, organizational, and communication skills.

2. Research Specialist (3 personnel):
    - Minimum Bachelor's degree required in science, environment, engineering, renewable energy, economy and finance, or other relevant disciplines.
    - Minimum 7 years of experience in research or work related to energy transition, renewable energy, or decarbonization in the power sector.
    - Having knowledge and experience in renewable energy/power system models, spatial analysis, and/or financial models is preferred.
    - Experience in writing reports, white papers, or recommendations for national stakeholders.
    - Ability to work collaboratively in a team environment and have good communication skills.

3.3 Pricing Proposal Requirements:

Please submit a detailed and transparent budget. This should include:

- A breakdown of costs by work package or deliverable.
- Estimated personnel work (e.g., by role or seniority level).
- Other costs, such as site visit, 1-on-1 interviews, focus group discussion, etc., if applicable. **Please note that other costs will be paid as at cost.**
- A proposed payment schedule tied to milestone delivery.

Estimated total contract value for personnel work and other costs is IDR 200.000.000 **including tax**.

3.4 Submission Method:

All proposals must be submitted electronically to the following email address:

- citra@iesr.or.id with cc to agus@iesr.or.id, yudistira@iesr.or.id and vanessa@iesr.or.id

Kindly ensure that all required documents are complete and submitted as a single email or download link (e.g., Google Drive or Dropbox, with open access settings).

No hard copies are required unless specifically requested by IESR.

Submission deadline: January 21st 2026 11.59 PM Western Indonesia Time (GMT+07)

3.5 Late Submissions:

Late submissions will not be considered. Please confirm receipt by email after submission.

4. EVALUATION CRITERIA AND SELECTION PROCESS

4.1 Evaluation Committee:

All submitted proposals will be reviewed and evaluated by a selection committee appointed by IESR. The committee will assess proposals only if the 11 documents (Consultant Documents, please find in

Section 7) along with other administrative documents, such as NIB, NPWP, company deed, and bank statements, are **completely submitted.** Otherwise, the committee **will not** assess the submitted proposal.

The committee will assess proposals based on technical quality, relevance, team qualifications, methodology, and cost-effectiveness. Only shortlisted candidates may be contacted for further clarification or interviews.

4.2 Evaluation Criteria:

IESR employs multicriteria assessment to evaluate the proposal as follows:

- **Organization profiling (15%)**, including capacity, experience, and past performance with IESR (if any).
- **The proposed expertise (30%)**, including compliance with the RFP requirements, compliance with the portfolio of work completed with the scope of work, and competencies in the design and engineering, finance and economics, and the environment.
- **Technical proposal (35%)**, including understanding of required services, methodology used, transparent work allocation and timeline, and additional value offered.
- **Reasonable and competitive bid price (20%)**, including suitability to team composition, work duration, and competency.

4.3 Evaluation Process:

Step	Stage	Description
1	Initial screening	Check for completeness, eligibility, and compliance with formatting and submission requirements.
2	Detailed technical review	Evaluate methodology, technical approach, team qualifications, past experience, and relevance.
3	Shortlisting	Identify top candidates based on technical and strategic fit.
4	Interviews	Invite shortlisted bidders to present proposals and answer questions (if applicable).
5	Final selection	Select the most suitable bidder based on cumulative evaluation scores and notify officially.

4.4 Award Decision:

The contract will be awarded to the most qualified bidder whose submission is deemed to be in the best interest of IESR. The selection will be based on the stated evaluation criteria, considering technical merit, relevance, team capacity, and overall value. The evaluation is **NOT solely** based on the lowest price offered.

5. TERMS AND CONDITIONS

5.1 Standard Contract Terms:

The selected contractor will enter into a formal agreement with IESR based on standard terms and conditions. The contract will cover the scope of work as outlined in the proposal and agreed upon

deliverables. The contract period will run from the commencement date specified in the agreement and continue until project completion, unless terminated earlier by either party with prior written notice.

The contractor will receive payment according to a predefined schedule tied to milestone delivery, as detailed in the payment annex. All outputs and deliverables developed under the contract will be the property of the procuring entity, unless otherwise agreed in writing. Both parties are expected to maintain the confidentiality of sensitive information shared during the engagement.

The contract will be governed by the laws of the Republic of Indonesia, and any disputes will be resolved through amicable negotiation or appropriate legal channels.

5.2 Confidentiality and Proprietary Information:

All proprietary or confidential information submitted by bidders will be treated with strict confidentiality and used solely for the purposes of evaluating the proposal. Such information should be clearly marked as “Confidential” or “Proprietary” in the relevant sections of the proposal.

The procuring entity (IESR) will not disclose any marked proprietary content to third parties without the bidder’s prior written consent, except as required by law or internal audit. Unmarked information may be treated as non-confidential.

5.3 Right to Reject/Modify:

IESR reserves the right to reject any or all proposals, to waive any informalities or minor irregularities in the submission process, and to enter into negotiations with one or more selected bidders as deemed necessary.

5.4 Disclaimers:

This RFP does not commit IESR to award a contract or pay any costs incurred in the preparation or submission of proposals.

5.5 Governing Law:

This Request for Proposal (RFP) and any resulting contract shall be governed by and construed in accordance with the laws of the Republic of Indonesia. Any disputes arising in connection with this RFP or the subsequent contract shall be subject to the exclusive jurisdiction of the courts of the Republic of Indonesia. This RFP is strictly open only to entities that possess a valid work permit in Indonesia.

6. INQUIRIES AND COMMUNICATIONS

6.1 Questions and Clarifications:

Prospective bidders may submit questions or requests for clarification regarding this Request for Proposal (RFP) to ensure a clear understanding of the scope, requirements, and expectations. All inquiries must be submitted in writing via email to citra@iesr.or.id with cc to agus@iesr.or.id,

yudistira@iesr.or.id and vanessa@iesr.or.id with the subject line: "RFP Question – Grid Connection Studies and Power Quality Analysis Nusa Penida – [Your Organization Name]".

To allow sufficient time for review and response, all questions must be received no later than 16 January 2026, 17.00 Western Indonesia Time (GMT+0700).

Responses to all inquiries will be compiled and distributed to all parties who have expressed interest in the RFP, maintaining fairness and transparency in the process. Please note that verbal inquiries or questions submitted after the deadline will not be addressed.

6.2 Q&A Session/Conference (if applicable):

N/A.

6.3 Addenda/Amendments:

Any changes, updates, or clarifications to this Request for Proposal (RFP) will be issued as formal addenda. These addenda will be distributed via email to all bidders who have registered their interest or submitted questions and will form an official part of the RFP documentation.

It is the responsibility of all prospective bidders to ensure they have received and acknowledged any such addenda. Failure to do so may result in disqualification due to non-compliance with updated requirements.

7. APPENDIX

Forms and Certifications:

Bidders are required to sign all necessary documents listed in this link: Consultant Documents

8. ACKNOWLEDGMENT

Reviewed by:	Approved by:
Signed by: Marlistya Citraningrum C37D8230-B30A-4B4A-BDDA-80F09F1A3BA5 **Dr. Marlistya Citraningrum** Director of Communication and Outreach	Signed by: 77ACB4D9-78F2-4431-8689-2FB1FC2C57C3 **Kharina Dhewayani** Director of Finance and Operations