**Request for Proposals (RFP) Template**
**for Commercial & Industrial Solar Projects in Indonesia**

The Clean Energy Investment Accelerator (CEIA) is a public-private partnership initiative, jointly led by World Resources Institute, the U.S. National Renewable Energy Laboratory, and Allotrope Partners, to drive deployment of clean energy solutions for large consumers in key emerging markets across the globe. The CEIA is supported by the U.S. Government, P4G, and other public, private, and philanthropic partners.

This RFP template is meant to enable the replication and scaling of renewable energy projects in commercial and industrial sectors. This document and supporting materials are available for download and can be requested in native formats via email to assist buyer companies with bid evaluation.

These are working documents informed by CEIA experiences to date in Indonesia and other markets, where CEIA has facilitated RFP processes in partnership with various commercial and industrial energy consumers. This RFP template will be updated over time to capture lessons learned. Additional CEIA resources and tools can be found at: www.cleanenergyinvest.org/resources.

This RFP template is designed to serve as a **starting point for commercial or industrial buyer companies seeking on-site solar projects for their facilities in Indonesia**. Buyer companies will need to customize and tailor this template and the supporting materials for their unique purposes, modifying content to align with desired financing models or offerings and adding specific information such as: proposal submission procedures, system specifications, site locations, key dates, local or domestic legal requirements, and other factors that may vary across technologies, projects, provinces, and circumstances. It is highly recommended that buyer companies engage their own legal counsel during the renewable energy procurement process.

Placeholders where project-specific data or inputs are needed are highlighted throughout the template.

The CEIA team welcomes feedback on this template as we continue to update our materials. To provide written comments or request further information, please contact info@cleanenergyinvest.org.

*Disclaimer: While CEIA aspires to make useful information for advancing clean energy widely available and user-friendly, this document is in no way meant to provide technical, legal, or financial advice or recommendations. Any company or individual using this RFP template takes full responsibility for their actions and absolves the CEIA and associated organizations of any liability.*

# REQUEST FOR PROPOSALS

## FOR
## [Project Title]

## Issued by: [Name of your Company]

## Project partner:
## Clean Energy Investment Accelerator

**[Date]**

**Responses due by: [insert date of the latest submission]**

**To: [email of the company for the RFP purpose]**

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## Confidentiality Statement

All information provided to or gathered by any company (Offeror) related to this RFP is confidential and should not be shared or otherwise communicated to outside companies, personnel or other parties not directly involved in this RFP. [Company] will attempt to maintain the confidentiality of all bids submitted, to the extent consistent with law or regulatory order, as long as such confidentiality does not adversely impact legal or regulatory requirements. Anonymized and aggregated data from this RFP process may be used by the Clean Energy Investment Accelerator (CEIA) as part of its mission to support clean energy adoption. It is the Bidder's responsibility to indicate in their proposal what information is deemed to be confidential. The Bidder may not mark an entire proposal as confidential, but must mark specific information on individual pages to be confidential in order to receive confidential treatment of such information.

# Invitation to Propose

**[Your company's name]**

**ISSUANCE DATE:** **[insert date]**

**RFP NO.** [ref no]

**PROJECT:** [Project title]

Dear Sir or Ma'am:

Through this Request for Proposals (RFP), Company ("Company") is soliciting proposals from qualified project developers (Offerors) to design, deliver, install and operate a rooftop grid-interactive solar photovoltaic (PV) system for its facility in [location].

Proposals **must** include a technical and price offer for a [insert type of business model you define for this RfP] Service rooftop PV solution. In addition, proposals must include a price offer (only) for relocating and continuing operations of the PV equipment at a second location.

> [insert what is required by your company from project developer  business model, capacity, contract lifetime, payment method, etc and special condition such as possibility of relocation]

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**INSTRUCTIONS:**

When submitting a proposal for this RFP, Offerors should note the following requirements:

1. A complete RFP package may be acquired online on [insert link where the bidders can get a full documentation of RfP]. For more information about this RFP, please contact:

   Name :
   Title :
   Email :

   Proposals must be submitted via electronic upload to [link to upload the document] per instructions in this RFP no later than [time and date of latest submission] West Indonesia Time (Jakarta Time).

2. Late submittals will be deemed non-responsive and will not be considered unless an extension has been requested and granted.
3. All Offerors shall provide sufficient written and verifiable information that responds to the requirements set forth herein and in the Scope of Work (SOW).
4. Any pre-proposal questions and/or clarifications shall be submitted to Company via email at [insert email address of the company's PoC]. Questions are welcome and should be sent no later than [insert time]. Company will consolidate and anonymize questions from all Offerors and will address them in a written addendum to this RFP for all Offerors to access.
5. The Offerors shall bear all costs and expenses associated with developing and/or submitting a proposal in response to this RFP, including any related activity following the proposal submission.
6. Company reserves the right to:
   a. Reject all proposals and reissue a new or amended RFP. Company may also issue addenda to the original RFP as necessary;
   b. Negotiate a contract with the selected Offeror;
   c. Request additional information from Offeror(s); and/or
   d. Waive any non-material deviations from the description outlined in the RFP at its sole discretion;
   e. Keep all the submitted documents from the Offerors.

SIGNED: _____ DATE: _____

# I. Background

[Provide some background of the company why they want to develop the RTS system]

The development of this RFP was supported by the Clean Energy Investment Accelerator (CEIA). The CEIA is a public-private partnership initiative supported by the U.S. and German governments as well as other partners to drive the deployment of clean energy solutions for large energy consumers in key emerging markets across the globe. The CEIA is jointly led by the World Resources Institute, the U.S. National Renewable Energy Laboratory, and Allotrope Partners.

Offerors who want to participate in this RFP must demonstrate the ability to perform the work outlined in this document and are expected to have significant experience successfully performing comparable work in Indonesia. Details about the submission requirements are included in *Section II.C, "Proposal Submission Requirements."* Company will evaluate the proposals based on company experience and the quality and pricing of their offerings, as outlined in *Section II.D, "Evaluation of Proposals."*

# II. Bidding Information

## A. Important Dates

The following are significant anticipated Scheduling and Contract Dates for this RFP:

| | |
|---|---|
| [insert date] | : RFP Issued |
| [insert date] | : Offerors Confirm Site Visit Attendance (optional) |
| [insert date] | : Offerors Conduct On-Site Evaluation (optional) |
| [insert date] | : Deadline for Offerors Submittal of Questions |
| [insert date] | : Deadline for Submittal of Final Proposals |
| [insert date] | : Proposal Evaluations / Interviews |
| [insert date] | : Notify Offerors of (Non-)Selection |
| [insert date] | : Contract Negotiations Begin |

**Site Walk:** A list of anticipated dates and times for on-site technical evaluations is provided below, and while optional, all RFP respondents are highly encouraged to participate. In addition to Offerors' experience and expertise, information gathered during the site walks and provided in this RFP are expected to be sufficient for Offerors to assess the roof, structural conditions, and electrical service point conditions, so as to propose an optimally designed system for the site.

[insert time, date, and location of the facility]

Offerors that will be participating in the site walks must register at [insert link to registration] to confirm their planned attendance by [insert date. In response to COVID-19 situation, the Offerors should follow the policy under Exhibit 7 and agree to submit required documents before to the visit.

**RFP Due Date**: Offerors shall submit the completed RFP documents in bilingual (English and Indonesian) no later than [insert time] to Company via this link: [insert link] via an electronic submission of the completed RFP documents in bilingual, English and Bahasa Indonesia. Where noted, all responses shall utilize spreadsheets, documents, and online submission forms as indicated in this RFP.

## B. Award

A contract for this project may be awarded to the qualified Offerors able to effectively negotiate terms for the project that provide the "best value" to Company as determined solely by Company and its agents. Company reserves the right to reject any or all proposals or any part of an individual proposal and to otherwise determine which, in their sole judgment, best meets their needs. If the selected Offeror seeks to add costs to the proposed project after selection or is unable to execute contract with Company effectively, Company may contract alternate Offerors to develop the proposed projects.

Please note, this document and the RFP process do not constitute a guarantee by Company or any associated parties to purchase a system or enter into binding negotiations or contracts with any firms

that respond to this RFP. Any costs associated with a firm providing a bid in response to this RFP are the sole responsibility of the Offeror. Offerors submitting responses to this RFP do so with the understanding that Company does not guarantee the award of any contract or work. Company reserves the right, at their sole and absolute discretion, to abolish, refresh, amend, or extend the scope or limitations of this project.

## C. Proposal Submission Requirements

All Offerors shall submit their proposals **no later than [insert time and date].** Late submittals will be deemed non-responsive and will not be considered.

Offerors need to upload the submissions on a dedicated website and organize the contents in a main electronic folder with sub-folders and files corresponding to the outline below. The main electronic folder, sub-folders, and files must be clearly named to indicate the Offeror and RFP content.

1. **Transmittal Form**: The Offeror shall submit a completed and signed "Proposal Transmittal Form" (Exhibit 1) printed on the Offeror's letterhead.

2. **Cover Letter**: Offeror shall submit a cover letter, not exceeding two (2) pages in length, which summarizes the key points in the RFP response and printed on the Offeror's letterhead. The Offeror shall identify proprietary and confidential materials in the proposal by mentioning the page number and the paragraph, as well as the basis of confidentiality. Offerors need to include the company's address, contact person, email address, phone number, and fax number.

3. **Offeror Qualifications**: To describe the Offeror's qualifications for performing the work described in this RFP, the Offeror shall compile the following information:
    a. **Company Qualifications.**
        i. The Offeror shall provide an overview of the company including:
            1. Status (private/publicly held, corporation, joint venture, etc.)
            2. Indonesian legal entity and/or other eligible entity able to conduct businesses in Indonesia under the applicable Indonesian laws and regulations
            3. Number of employees (this should include key figures about employment and gender balance of the company)
            4. Provinces and countries in which the company does business
            5. Length of experience and types of customers (residential, commercial, industrial, government, etc.)
            6. Any other information the Offeror deems relevant.
        ii. **The Offeror shall complete and include the "Offeror Experience Form**" (Exhibit 2) with at least three (3) referenced projects. The form should consist of the most relevant construction projects that are similar in type, size and complexity to this project.
        iii. **The Offeror will provide satisfactory evidence of sufficient capital, facilities, and plant required to perform the proposed work successfully and promptly within the terms outlined in the RFP**. The Offeror needs to provide these documents in both Indonesian and English. For documents requiring translation, the Offeror needs to provide the original document along with a certified translation.

Offerors should submit **Articles of Incorporation and audited financial statements from the last two years** in addition to at **least one** of the options listed below:

1. Articles of Incorporation **(required)** and
2. 2 years of audited financial statements (**required**), and
3. Credit rating (optional), or
4. Audited cash flow statement (optional), or
5. Tax form submission for one year (optional).

iv. **The Offeror shall demonstrate financial capabilities** (e.g., confirming sources of funds or a letter of support from a bank or other investor) to prove that the Offeror can finance the proposed project.

**b. Key Staff CVs:** The Offeror will provide CVs for each of the key personnel (including from partner or sub-contracted organizations) that will be directly involved with the development and implementation of the work being proposed. "Key personnel"include, at a minimum, project managers and technical leads directly related to the project.

**c. Licenses:** The Offeror, its partners, or its subcontractors must hold appropriate and current professional certifications and business licenses for the requested professional services. The Offeror needs to submit proof of all relevant professional certifications, business licenses, and technical licenses.

**4. Technical Proposal:** The Offeror shall submit a full and detailed Technical Proposal that describes the goods, services, and procedures that address entirely the requirements presented in the Scope of Work. The sub-sections (a - k) immediately below provide an outline and brief description of the content each Offeror should address in its proposal. Specific technical details are provided in the Project Summary and Scope of Work sections of the RFP.

**a. Project Approach:** The Offeror shall describe the project's goals and objectives, general technical solution, teaming approach, and construction management approach that support work proposed for this RFP. Include a general technical description of the proposed system.

The Offeror must describe the organization of the propose team, including identifying the overall project manager and organizational relationship with key technical personnel. The Offeror must identify key tasks to be performed by any partners or subcontracted firms. Additionally, the Offeror needs provide a brief description of these companies, along with copies of documents that indicate an agreement to collaborate on the proposed project with each company.

The Offeror should describe all proposed deviations from the Scope of Work included in this RFP. If the Offeror cannot offer the full scope of services, the Offeror may provide a contact or offer from a company that can, or leave it open.

**b. Solar PV System Design:** The Offeror needs to provide the design of each solar PV system and their components including concept drawings, equipment information, and interconnection, metering, and monitoring requirements that satisfy the system requirements detailed in the Scope of Work. In addition to the information below, Offerors must submit a System Design (Exhibit 3) to summarize key performance data.

**i. Concept Drawings:** The Offeror shall provide concept drawings that indicate the proposed location of the PV arrays and access points along with a one-line electrical diagrams showing inverters, transformers, meters, and interconnection locations.

In addition, the Offeror should present an assessment of the roof conditions for suitability of the projects, and any other facility limitations that may constrain operations.

ii. **Equipment Information:** The Offeror shall provide technical information detailing the equipment being proposed including:

1. Technical specifications and models of key equipment;
2. Evidence that the proposed technology and equipment meet or exceed applicable safety and interconnection standards;
3. Performance and design life of equipment components and subsystems, including curves and expected degradation for PV panels and inverters;
4. All engineering associated with structural and mounting details; and
5. Controls, monitors, and instrumentation

iii. **Interconnections, Metering, and Monitoring:** The Offeror will describe the technical and administrative requirements for any proposed connections of the PV system to relevant electrical distribution systems and controls that are both external and internal to Company's facilities.

Describe in detail the overall system architecture for controls and communication between system components. Provide details on data acquisition, communications protocols, and analytics.

Describe any equipment (including necessary upgrades) and technical studies needed to connect the system and protect them according to industry best practices and applicable regulations and codes.

Describe the equipment and connections for metering and monitoring, including two-way metering if net metering with PLN is proposed. Describe connections and integration with existing communications and controls if applicable. Highlight cybersecurity concerns and mitigation techniques. Describe or list the system data that will be monitored and managed by the equipment.

Describe any administrative and legal procedures needed, including any interconnection agreements and easements that may be necessary.

c. **Price Proposal Narrative:** The Offeror must fill in Exhibit 3 as detailed in section 5 below. In addition, the Offeror must provide a narrative description of the monthly combined installation and O&M fee during the first year and escalation over the life of the project; financial flows for sale of excess electricity, if applicable; penalties associated with early contract termination; and any costs that are not otherwise included in the proposal.

d. **Procurement:** The Offeror will outline the key considerations for equipment and services procurement, particularly as it may impact system quality and schedule. The Offeror should demonstrate knowledge of potential suppliers, equipment availability,

delivery timelines (including customs procedures if applicable), and the existence (if any) of local content requirements (TKDN).

e. **Commissioning and Acceptance Testing:** The Offeror shall provide a high-level plan outlining the process for testing and commissioning the solar PV system.

f. **Project Schedule:** The Offeror shall provide an initial project schedule including milestones and timelines. The project schedule shall cover at a minimum, permitting and interconnection agreement, regulatory approvals, design, procurement, shipping and delivery, construction/fabrication, installation, testing, startup and commissioning of the solar PV system. The schedule should include any phasing of activities necessary to accommodate construction completion at the site.

g. **Operations and Maintenance:** The Offeror must describe of the O&M services for the PV systems.

h. **Insurance and Warranties:** The Offeror must describe the product warranty information for proposed racking, modules, inverters, and control equipment. In addition, the Offeror will describe insurance covering the roof and the construction and installation workmanship.

i. **Performance Guarantee:** The Offeror will provide a detailed description of the performance guarantee that ensures a guaranteed minimum amount of electricity (kWh) to be produced by the system for the term of the contract, broken out on an annual basis. The Offeror needs to provide this document in the form of a narrative description of the electricity delivery guarantee values and present it in Exhibit 3. In addition the Offeror will provide a written description of the terms of the true up accounting to ensure that any electricity delivery shortfalls balance with installation fees, included true up frequency and accounting procedures.

j. **Safety Plan:** The Offeror will describe its company-level safety process or program that it uses to ensure safe working conditions and adequately trained employees. The Offeror must describe its safety record, and any mitigation efforts that have been put in place to correct sub-par safety records.

   In addition, the Offeror will describe the safety plan that will be utilized for the project site during both the construction and O&M phases, including Company, partner, and sub-contracted personnel.

k. **Plan for Regulatory and Environmental Compliance**: Offerors must describe a plan that demonstrates that they are capable of obtaining all required permits and licenses and provide an estimated timeline for approval. This timeline should be included as part of the project schedule as described above.

5. **Price Proposal:** Offeror shall complete the System Description and Pricing Proposal Form (Exhibit 3) to provide its price proposal for the required [insert type of business model you define for this RfP] offering.

[insert type of business model you define for this RfP] scope of services quoted in the proposal should be for the provision of all tasks required to design, engineer, permit, fabricate, deliver, install, commission, and operate, maintain, and at the end of the contract to transfer ownership of the PV system to Company. The scope shall also include, but not be limited to, securing all permits and approvals from governing agencies, all labor, taxes, services, interconnection and environmental studies and costs, and equipment necessary to produce a fully operational solar PV system.

The price should lay out monthly fees that include all equipment, labor and services needed to ensure compliance with the guaranteed annual minimum delivery of electricity over the project lifetime.

All prices should be provided in Indonesian rupiah (Rp), with and without VAT. All payments will be made in Indonesian rupiah (Rp).

## D. Evaluation of Proposals

The RFP evaluation is to determine which Offerors are deemed responsible, qualified, and capable of performing the proposed work, and to determine which technical proposals offer the best value to Company. Each Proposal will be subject to an evaluation by representatives of Company, its affiliates and/or external parties appointed by Company. Evaluations will be based upon the submitted documents and any other information available. Company retains the sole discretion to determine issues of compliance and to determine whether an Offeror is responsive and responsible.

Proposals will be initially evaluated to determine which Offerors are deemed minimally qualified to perform the work based on technical capability and financial capacity. Only proposals from Offerors deemed to be minimally qualified will be included for further consideration. Offerors must meet the following requirements to be considered as qualified; Company has a right to reject proposals from an Offeror that does not meet these requirements and to keep the documents in its possessions:

Technical Capability

- The Offeror must possess all licenses and permits required by laws and regulations to perform the work under this RFP.
- The Offeror must have experience performing work similar in size and scope; locally or internationally.
- The Offeror must have staff or partners capable of performing the work being proposed under this RFP.

Financial Capacity

- The Offeror or its subsidiaries shall be a registered company in Indonesia.
- The Offeror must demonstrate the ability to acquire sufficient financing to fund the project.

Proposals from Offerors deemed to be qualified will be evaluated by Company based on several factors including, but not limited to the following:

**Qualifications & Experience (25%)**

- Strength of qualifications and experience of proposing firms and key personnel
- Strength of project references, customer satisfaction, completion of projects equivalent to those included in this RFP, and success in maintaining project budgets and schedules
- Financial stability and proof of funding for these projects with proven track record

- Experience in the local market

**Technical Proposal (25%)**

- Preliminary system design is appropriate for site needs, accounts for site conditions, and is optimized to take advantage of the site conditions
- Projected energy production is realistic and appropriate for each facility
- Module, inverter, racking, and monitoring components are high quality, available, and have a strong track record and warranty coverage and reflect Company's component specifications per Section III.B, "Scope of work"
- Proposal is complete and covers all the requirements given under the Scope of Work

**Project Costs (50%)**

- Clear and detailed proposal allowing for proper proposal analysis, including financial flows for sale of excess electricity to the grid (if applicable)
- [insert type of business model you define for this RfP] price and benefits over the life of the contract

# III. Project Information

## A. Project Site Description

Through this project, Company seeks to cover a portion of its electricity requirements, reduce electricity costs, and reduce its environmental footprint. Company seeks a PV system design of approximately [insert estimated capacity]. All electricity will be mostly consumed on-site, with excess exported to the grid as appropriate.

Roof schematics for the site are provided in Exhibit 4. Single line diagrams are provided in Exhibit 5. Load profile data are provided in Exhibit 6.

Company has endeavored to ensure the information included in the RFP is accurate and complete, but errors and omissions may have inadvertently occurred. Company makes no representations concerning the site, including its suitability. Offerors shall take full and sole responsibility for conducting any necessary due diligence in assessing the site and its conditions in order to develop accurate proposals.

## B. Scope of Work

1. **Overview:** Proposals must include an offer for a [insert type of business model you define for this RfP] solution and [insert special case. For example, non-binding price proposal for relocation of rooftop PV equipment]. The successful Offeror shall perform all professional planning, design, and engineering services for this project as necessary to install, operate and maintain a system that reflects the technical requirements outlined herein. The system will be installed on the rooftop of the Company's facility in Jl. [location] in Indonesia ("Site"). The Offeror shall also take all actions necessary to satisfy all applicable local, provincial, and Indonesian regulations and requirements, including but not limited to safety, environmental and utility requirements.

   The design of the solar PV system should take into account the Company's electrical demand and load patterns, project cost, proposed installation site, available solar resources, existing site conditions, proposed future site improvements, and other relevant factors.

   The successful Offeror will be responsible for financing, designing, engineering, procuring, constructing, installing, testing, commissioning, operating, monitoring and maintaining the solar PV system for the duration of the project's lifetime. The scope of services shall also include, but not be limited to, securing all permits, approvals, and interconnection rights from governing agencies, all labor, taxes, services, and equipment necessary to produce a fully operational solar PV system.

   In addition, if so chosen by Company, the Offeror will dismantle and relocate the PV equipment to a new site located in [insert location], return the site with no or minimal damage, and ensure PV system operability that will produce electricity as described in the Performance Guarantee. The Performance Guarantee will be re-established and adjusted by mutual agreement (if Company opts to relocate the system.).

   The System must conform to the rules, regulations and guidelines of the Ministry of Energy and Mineral Resources (MEMR) Regulation 49/2018 in conjunction with MEMR Regulation No. 13/2019 on the Utilization of Rooftop Solar Power Systems by Customers of PT Perusahaan Listrik Negara (PLN) and any related specific laws, policies and regulation required by relevant Indonesia government bodies. The system must also comply with the technical requirements of PLN and its relevant local subsidiaries (Power Companies).

Exhibits 4-6 provide site-specific facility schematic diagrams that offer context and may aid Offerors in the development of their proposals. Offerors are responsible for requesting additional information they deem necessary to respond to the RFP adequately.

2. **PV Equipment Requirements**: The Offeror needs to meet the following performance criteria for the proposed system:
    - Include all necessary equipment to connect the main distribution boards to the transformers.
    - PV modules will be Tier I bankable modules; There is no preference between monocrystalline, polycrystalline or thin-film type modules. Only solar cells that are referred to SNI IEC 61215:2016 and solar cells and supported component systems that are referred to SNI ISO/IEC 17025:2017 shall be used as components in the project.
    - The PV System must be able to be built on the [if the roofing is specific, please describe here] rooftop that is provided by Company.
    - The STC-rated power value will be entered into PVWatts (http://pvwatts.nrel.gov/) or a similar database using the nearest weather file to determine estimated energy delivery in kWh AC. A default value for the system losses of 14% shall be used unless another value can be justified.
    - All proposed/implemented PV array locations shall be designed to be shade free from 9AM until 3PM (solar time). The Offeror shall provide documentation of shading calculations for exterior extents for each proposed array. These calculations may be modified for shading obstructions that will be removed and mitigated as part of the project. Suggested documentation would include sun path diagrams for exterior array locations or SunEye measurements.
    - The PV System shall comply with applicable codes and standards, and all of the PLN and other interconnection requirements, including net metering, if applicable.
    - Major electrical equipment such as inverters, transformers and switchgear shall be installed in code-compliant enclosures. Components shall be located indoors in areas identified in consultation with Company in ventilated (not air-conditioned) utility rooms in compliance with codes and where space allows. If located outdoors, equipment shall be in enclosures appropriate for the conditions and code-compliant and protected from direct exposure to the elements (sun, rain) and debris such as leaves or dirt.
    - The procurement and installation of the combiner boxes and inverter(s) should be from a top-tier supplier that provides technical support. Equipment will include mounting and cabinets and will preferably be SCADA compatible.
    - All PV hardware and rack components shall be corrosion resistant material such as stainless steel, aluminum or hot-dipped galvanized steel.
    - The system shall utilize only copper wire (not aluminum) unless Company, PLN, and authority having jurisdiction agree to other materials. Cabling will be DC-rated, UV and heat resistant, and preferably locally sourced. Wire shall not lie exposed directly on roof surface or floors. Due to potential damage from rodents and future digging, power cables shall not be buried directly without conduit.
    - Supporting structures must have a X year lifetime (or match the contract length of Offeror) and must have TUV Rheinland certificate or equivalent.

The Offeror's proposal must provide the following as part of a professional yield calculation for the proposed system, as in Exhibit 3:

- System size (kW DC)
- Array Slope/Tilt (degrees)
- Magnetic Azimuth (degrees)
- Documentation of shading calculations for any expected shaded areas of the PV array
- Modul Manufacture
- Inverter Manufacture

3. **System Design Requirements:** The PV system shall be limited to the roof area that has been identified as available for that purpose in consultation with Company. The system should be designed to provide the power that coincides with the demand characteristics of the facility. The Offeror is ultimately responsible for performing its own field investigations and determination of optimal PV system design.

    a. **Detailed Premises Information:** The Offeror shall ensure that the proposed PV project is compatible with all aspects of the building, including, but not limited to electrical, structural, roof warranty (if applicable), lightning and fire protection, as well as security and other building operations. The PV arrays and balance of system components (inverters, combiners, switchgear, conduit) including supports and power conductors shall not interfere with roof drains, expansion joints, air intakes, existing electrical and mechanical equipment, existing antennas, lightning protection systems or any other building equipment.

    The Offeror must assess the structural integrity of the roof and determine the most appropriate design for the PV mounting system to maintain structural integrity and meet applicable codes and standards. If the Offeror determines that the roof requires major alteration or repair, the successful Offeror and Company will negotiate to make alterations / repairs or to omit installation on the roof that requires major alteration or repair. The successful Offeror shall be responsible for alterations or repairs, and of all damage to the roof during construction.

    b. **Electrical Modifications and Interconnections:** The successful Offeror shall be responsible for the electrical design, including voltage and phase configuration, inverter-side low voltage boards, and the point of interconnection to the building electrical distribution system. The successful Offeror is also responsible for proper circuit sizing, overcurrent protection and coordination with existing over-current and voltage regulation schemes, including lightning protection, beyond the point of interconnection.

    The successful Offeror will be responsible for the interconnection of the PV system with the building electrical distribution system and the local electric distribution system. This includes performing all design work, coordinating with Company, the local distribution company, and PLN as necessary, and providing all the requires equipment.

    The successful Offeror shall coordinate with PLN to ensure that the project satisfies all PLN criteria and requirements for the interconnection of the project to the PLN electric distribution system. This includes coordinating all negotiations, meeting with PLN, performing power system studies and design reviews, and participating in any needed interaction between PLN and Company. The successful Offeror will be responsible for

preparing required submissions for obtaining written approval from PLN for Solar PV system installation and net metering as necessary.

Moreover, the Offeror will be responsible for obtaining and securing the certificate of operation (SLO) from the certified technical inspection institution indicated by applicable MEMR guidelines and procedures. The Offeror will also be responsible for assisting and securing the technical licenses, including but not limited to the Operational License (IO) from the MEMR, Lightning Protection Permit, and other required permits as necessary.

The successful Offeror shall coordinate with over-current protection schemes including coordination relays, fuses, etc. The PV System shall enable the protection system to operate as intended under grid fault conditions. The successful Offeror shall manage interconnection and startup of the project in coordination with Company, local distribution company, and PLN.

**c. Monitoring:** Monitoring of system performance shall be integrated into the existing automated management system if applicable; optionally, the Offeror may separately propose a dedicated software system connected to the hardware. Monitoring equipment will be compatible with the software of the relevant component suppliers. Provide a data acquisition and display system that allows the operator to monitor, analyze, and display historical and live solar electricity generation data, and share that data with Buyer as requested.

The regularly collected data should reflect, but not be limited to, the following:

i. System performance
ii. System availability
iii. Average and accumulated output
iv. Excess energy sold to the grid via net metering (if applicable)
v. Capacity factor
vi. Environmental conditions (solar irradiance, ambient air temperature, etc.

The monitoring system for environmental conditions may be from remote sensing (high resolution, site-specific satellite data) may be subscribed to instead of on-site measurements.

For any connection to Company's intranet and/or internet networks, the successful Offeror shall ascertain and comply with all cyber security requirements before the operation.

**d. Codes, Standards and Regulations** The successful Offeror, its partners and subcontractors must comply with applicable codes, standards and requirements as accepted by local, provincial, and national authorities having jurisdiction for equipment, building, electrical, interconnection, mechanical, fire, seismic, and wind uplift considerations. In addition, the Offeror is exclusively responsible for obtaining and maintaining all required government permits, licenses, approvals and/or variances, current or future. It is the responsibility of the Offeror to know the laws and regulations of the construction and operation of the PV system.

Equipment not listed in SNI IEC 61215:2016 or SNI ISO/IEC 17025:2017 are only permitted for use as project components when a comparable usable listed component does not exist. Non-listed products proposed for use as components must be identified as such in all submittals. Offerors may be asked to provide evidence that the proposed technology and equipment would meet or exceed all currently applicable and proposed safety and interconnection standards in Indonesia.

**e. Construction, Commissioning and Test Period:** The Offeror must provide an initial project construction schedule as part of its proposal, including details of work phases marked with starting and finishing dates. Company reserves the right to terminate the

project due to significant or unreasonable delays. Criteria for penalty, remedy period and termination clauses will be negotiated between Buyer and the successful Offeror.

Before the installation of the System, the successful Offeror will inspect the roof and its structure to ensure they are in a condition appropriate for safe installation. The Offeror is responsible for any structural reinforcements necessary.

During construction, the successful Offeror will be responsible for the management of all delivered materials. A temporary storage location will be provided for the duration of the work period.

The successful Offeror will perform commissioning and acceptance testing of the system before beginning operations. During the start-up the Offeror shall observe and verify each system performance test. The required commissioning and acceptance test services include: visual inspection, array testing, and whole-system performance testing.

The successful Offeror shall provide training for designated Company personnel on the equipment that they might encounter and in operations related to the PV system that they might need to perform in emergency situations.

**f. Operations and Maintenance:** The successful Offeror will be responsible for all aspects of operating and maintaining the PV system to meet the delivery requirements of the contract, including continued compliance with applicable code requirements and safety.

The successful Offeror shall inspect the system in appropriate intervals but not less than twice-per-year and perform preventive maintenance to ensure the PV system is intact, safe and functioning properly. Preventive maintenance work includes periodic equipment inspections, cleaning, replacement of filters, tests, calibrations, and other preventive maintenance tasks, including those specified by the original equipment manufacturer, to ensure that the system and its components operate as intended. The successful Offeror will also perform emergency maintenance and repair work to correct any existing or imminent failure or to protect the safety or health of the facility occupants and prevent adverse impacts on property.

The successful Offeror shall maintain adequate and necessary records of inspections and maintenance, which will be made available to Company throughout the duration of the contract.

**g. Performance Guarantee:** The Offeror must provide a performance guarantee that ensures a minimum amount of energy is provided by the system over the lifetime of the contract. Offerors must provide relevant performance guarantee information in the Pricing Proposal Form (Exhibit 3). In addition, the Offeror must propose a true up process that clearly lays out the intervals and mechanisms for compensating Company for any electricity delivery shortfalls that may occur in a given time period. Mechanisms may include cash payments, discounts against future installment fees, or other mechanisms designed by the Offeror to equitably balance payments with electricity delivered.

**h. Ownership Transfer:** At the end of the [insert type of business model you define for this RfP] contract, the Offeror will transfer the ownership of all equipment associated with the solar PV project to Company.

**i. Health and Safety:** The successful Offeror shall comply with all applicable laws of the health and safety of persons and property, including handling and storage of hazardous materials, disposal of hazardous wastes and substances, and disposal of construction waste. Company believes that safety is paramount, and a commitment to safety must be demonstrated by the Offeror including plans to manage its sub-

contractors. The successful Offeror must support the development of fire and safety plans, and provide safety training to personnel on the site, including impacted Buyer's employees, partners, and sub-contractors covering all relevant system activities throughout the various project phases.
The Offeror's personnel and subcontractors working within the site premises must strictly adhere to the applicable safety and security rules and procedures, including but not limited to the Exhibit 7 on the Covid-19 Extraordinary Event Emergency Response Procedure.

All equipment components must be listed or recognized by an appropriate safety testing laboratory and meet existing facility structural and fire safety requirements.

**j.** **Compliance with Environmental Regulations**: The Offeror shall comply with applicable local, provincial and national environmental regulations, including but not limited to development of relevant environmental studies and mitigation plans, and management of hazardous materials, noise pollution, and stormwater.

**k.** **Insurance and Warranties**: The Offeror must take extra care during the installation period to ensure the safety and security of the site, their personnel and their customers. The Offeror shall take an insurance policy covering all risks and liabilities, including Third Party Liability, during the installation period and O&M period, to cover any damages to Company's property and facilities or any delay or losses of Company's business operations that may occur.

The Offeror should include a minimum roof warranty (e.g. where penetrations are made) covering parts and labor. At a minimum, the warranty should match the contract length.

**l.** **Renewable Energy Credits (RECs) and Incentives**: Company retains all rights to renewable energy certificates (RECs) and other environmental attributes of the generated electricity, including the ability to retire credits.

# Exhibit 1 – Proposal Transmittal Form

[To be presented on Offeror's letterhead]

Date:_____

PT . Company

Jl.

To Whom It May Concern:

The undersigned (hereafter referred to as the Offeror) hereby provides the requested proposal information for: [RFP Reference Number if Applicable] **Company Rooftop Solar Photovoltaic (PV) Project** in accordance with the Scope of Work and other procurement requirements specified in the RFP for the prices stated in the itemized proposal forms submitted herewith, plus any and all sums to be added and/or deducted resulting from all extra and/or omitted work in accordance with the unit prices stated in the itemized proposal forms attached hereto.

The Offeror has read the RFP Instructions and Submission Requirements, and confirms all the proposal's requirements are submitted accordingly, unless otherwise specified by the Offeror. The Offeror understands and accepts the terms of the proposal requirements.

In addition to this Proposal Transmittal Form this proposal includes the following:

[ ] 1. Cover Letter

[ ] 2. Proposal Narrative (containing Offeror Qualifications, Technical Proposal, and Price Proposal)

[ ] 3. Offeror Experience Form (Exhibit 2)

[ ] 4. System Description and Price Proposal Form (Exhibit 3)

The Offeror agrees that this proposal shall remain firm and irrevocable within **ninety (90) calendar days** from the date opening to supply any or all of the items which prices are proposed.

_____

Signed

_____ Seal

Date

# Exhibit 2 – Offeror Experience Form

| **Experience and Reference Information** | **Referenced Project # 1 (Required)** | **Referenced Project # 2 (Required)** | **Referenced Project # 3 (Required)** | **Referenced Project # 4** (Optional) | **Referenced Project # 5** (Optional) |
|---|---|---|---|---|---|
| **Role(s) your organization performed** | | | | | |
| **Name of lead Offeror** | | | | | |
| **Location** | | | | | |
| **Project description (Product name/type, PV module used)** | | | | | |
| **Date installed** | | | | | |
| **kW rating** | | | | | |
| **Current operational status of system** | | | | | |
| **Customer Name** | | | | | |
| **Customer Title** | | | | | |
| **Customer's Telephone** | | | | | |
| **Customer's Email** | | | | | |

# Exhibit 3 - System Description and Price Proposal Form

**Offeror to fill in all cells in yellow in the tables below:**

1. **System Design**

| Site | System Size (kW DC) | Array Slope/Tilt (degrees) | Magnetic Azimuth (degrees) | Estimate Shading on Array (%) | Module Manufacturer | Inverter Manufacturer |
|---|---|---|---|---|---|---|
| [Company Location] | | | | | | |

2. **Hire Purchase O&M Price**

| | | | | |
|---|---|---|---|---|
| [Company Location] | **Monthly Price during Year 1 (Rp/month)*** | **Monthly Price during Year 2 (Rp/month)*** | **Monthly Price during Year 3 (Rp/month)*** | **Monthly Price during Year 4 (Rp/month)*** |
| | | | | |
| | **Monthly Price during Year 5 (Rp/month)*** | **Monthly Price during Year 6 (Rp/month)*** | **Monthly Price during Year 7 (Rp/month)*** | **Monthly Price during Year 8 (Rp/month)*** |
| | | | | |
| | **Monthly Price during Year 9 (Rp/month)*** | **Monthly Price during Year 10 (Rp/month)*** | **Monthly Price during Year 11 (Rp/month)*** | **Monthly Price during Year 12 (Rp/month)*** |
| | | | | |
| | **Monthly Price during Year 13 (Rp/month)*** | **Monthly Price during Year 14 (Rp/month)*** | **Monthly Price during Year 15 (Rp/month)*** | **Monthly Price during Year 16 (Rp/month)*** |
| | | | | |

*Monthly Price should include installment and O&M fees

**3. Guaranteed Annual Energy Production over Project Lifetime**

| **Year Number*** | **Guaranteed Energy Production (MWh AC/yr)** | Estimated Excess Energy Available for Net Metering (MWh AC/yr) |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |

*The number of years filled out by Offeror should match the proposed contract length

# Exhibit 4 – Roof Schematic

[insert link to where the bidder can see this document]

# Exhibit 5 – Single Line Diagrams

[insert link to where the bidder can see this document]

# Exhibit 6 – Electricity Consumption and Load Profile Data

[insert link to where the bidder can see this document]

# Exhibit 7 – Covid-19 Extraordinary Event Emergency Response Procedure

[insert link to where the bidder can see this document]