



REQUEST FOR PROPOSAL (RFP)

NAME & ADDRESS OF FIRM	DATE: November 25, 2019
	REFERENCE: RFP/UNDP/ENV-MTRE3/73138/031/2019 DETAILED FEASIBILITY STUDY FOR INSTALLATION OF SOLAR-PV HYBRID POWER PLANT IN MANADO TUA & NAIN ISLANDS, NORTH SULAWESI PROVINCE

Dear Sir / Madam:

The United Nations Development Programme (UNDP) hereby invites you to submit a Proposal to this Request for Proposal with reference **DETAILED FEASIBILITY STUDY FOR INSTALLATION OF SOLAR-PV HYBRID POWER PLANT IN MANADO TUA & NAIN ISLANDS, NORTH SULAWESI PROVINCE**.

A **bidder's conference** will be held on:

Date/Time : Thursday, 28th November 2019 starting 1330 hrs (GMT +7)

Place : MTRE3 Office Meeting Room, Menara Ravindo, 6th Floor, Jl. Kebon Sirih Raya No. 75
Menteng - Jakarta Pusat, 10340

Detailed Terms of Reference (TOR) as well as other requirements are listed in the RFP available on UNDP ATLAS e-Tendering system (<https://etendering.partneragencies.org>) **Event ID: 4941**

Your offer, comprising of a Technical and Financial Proposal, should be submitted in accordance with the RFP requirements, through the UNDP ATLAS e-Tendering system and by the deadline indicated in <https://etendering.partneragencies.org>.

NOTE! The Technical Proposal and Financial Proposal files **MUST BE COMPLETELY SEPARATE** and uploaded separately in the system and clearly named as either "TECHNICAL PROPOSAL" or "FINANCIAL PROPOSAL", as appropriate. Each document shall include the Proposer's name and address.

The file with the "FINANCIAL PROPOSAL" must be encrypted with a password so that it cannot be opened nor viewed until the Technical Proposal has been found to be pass the technical evaluation stage. Once a Technical Proposal has been found to be responsive by passing the technical evaluation stage, UNDP shall request the Proposer to submit the password to open the Financial Proposal.

The Proposer shall assume the responsibility for not encrypting the Financial Proposal. **NOTE: DO NOT ENTER BID AMOUNT IN THE SYSTEM, INSTEAD ENTER THE NUMBER 1.**

In the course of preparing and submitting your Proposal, it shall remain your responsibility to ensure that it is submitted into the system by the deadline. The system will automatically block and not accept any bid after the deadline. In case of any discrepancies, the deadline indicated in the system shall prevail.

Kindly ensure that supporting documents required are signed and stamped and in the .pdf format, and free from any virus or corrupted files and the **FINANCIAL PROPOSAL IS PASSWORD PROTECTED.**

NOTE: The file name should contain only Latin characters (No Cyrillic or other alphabets.).

You are kindly requested to indicate whether your company intends to submit a Proposal by clicking “Accept Invitation” but not later than **28th November 2019**. If this is not the case, UNDP would appreciate indicating your reason, for our records.

If you have not registered in the system before, you can register by logging in using:

Username: event.guest

Password: why2change

The step by step instructions for registration of bidders and quotation submission through the UNDP ATLAS e-Tendering system is available in the attached “Instructions Manual for the Bidders”. Should you require any training on the UNDP ATLAS e-Tendering system or face any difficulties when registering your company or submitting your quotation, please send an email to feby.utari@undp.org and yusef.millah@undp.org.

Please note that ATLAS has following minimum requirements for password:

1. Minimum length of 8 characters;
2. At least one capital letter; and
3. At least one number.

New proposer registering for the first time, the system will not accept any password that does not meet the above requirement, and thus registration cannot be completed.

For existing vendor whose current password does not meet the abovementioned password requirements, the system will prompt you to change your password upon signing in. Please change your password in accordance with the abovementioned password requirements to be able to login to the system.

The user guide and video are available to you in the UNDP public website in this link:

<http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement:notices/resources/>. You can also access the instruction from youtube with link:

<https://www.youtube.com/watch?v=Trv1FX6reu8&feature=youtu.be>.

You are advised to use Internet Explorer (Version 10 or above) to avoid any incompatibility issues with the re-tendering system.

No hard copy or email submissions will be accepted by UNDP.

UNDP looks forward to receiving your Proposal and appreciate your interest to participate in UNDP procurement opportunities.

Sincerely yours,



Martin Stephanus Kurnia
Procurement Analyst
11/25/2019

Description of Requirements

Context of the Requirement	DETAILED FEASIBILITY STUDY FOR INSTALLATION OF SOLAR-PV HYBRID POWER PLANT IN MANADO TUA & NAIN ISLANDS, NORTH SULAWESI PROVINCE			
Implementing Partner of UNDP	The Ministry of Energy and Mineral Resources (MEMR), Directorate General for New and Renewable Energy and Energy Conservation (DG-NREEC)			
Brief Description of the Required Services ¹	The objective of this assignment is to conduct detailed feasibility study for installation of solar photovoltaic (solar-PV) hybrid power plant in Manado Tua and Nain islands in North Sulawesi Province.			
List and Description of Expected Outputs to be Delivered	The key expected output under this assignment is a detailed feasibility study report for installation of solar photovoltaic (solar-PV) hybrid power plant in Manado Tua and Nain islands in North Sulawesi Province.			
Person to Supervise the Work/Performance of the Service Provider	Senior Advisor on Renewable Energy, Environment Unit, UNDP Indonesia			
Frequency of Reporting	<i>Please Refer to Annex 3 – Terms of Reference</i>			
Progress Reporting Requirements	<i>Please Refer to Annex 3 – Terms of Reference</i>			
Location of work	<input checked="" type="checkbox"/> At Contractor's Location, Jakarta and North Sulawesi Province as specified in the TOR attached to this RFP			
Expected duration of work	90 working days within 4 months			
Target start date	06 January 2020			
Latest completion date	06 May 2020			
Travels Expected	Shall be agreed upon starting, UNDP shall be responsible of any travel out of the agreed duty station			
	Destination/s	Estimated Duration	Brief Description of Purpose of the Travel	Frequency
	Manado Tua	3 days	Feasibility Study	1 time
	Nain Island	3 days	Feasibility Study	1 time
	Manado Tua	4 days	Detail Feasibility Study	1 time

¹ A detailed TOR may be attached if the information listed in this Annex is not sufficient to fully describe the nature of the work and other details of the requirements.

	Nain Islan	4 days	Detail Study	Feasibility	1 time	
Special Security Requirements	<input checked="" type="checkbox"/> Comprehensive Travel Insurance					
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	<input checked="" type="checkbox"/> Liaise with the relevant stakeholders					
Implementation Schedule indicating breakdown and timing of activities/sub-activities	<input checked="" type="checkbox"/> Required					
Names and curriculum vitae of individuals who will be involved in completing the services	<input checked="" type="checkbox"/> Required					
Currency of Proposal	<input checked="" type="checkbox"/> United States Dollars <input checked="" type="checkbox"/> Local Currency for Local Bidders					
Value Added Tax on Price Proposal ²	<input checked="" type="checkbox"/> must be exclusive of VAT and other applicable indirect taxes					
Validity Period of Proposals (Counting for the last day of submission of quotes)	<input checked="" type="checkbox"/> 90 days In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.					
Partial Quotes	<input checked="" type="checkbox"/> Not permitted					
Payment Terms ³	<i>Please Refer to Annex 3 – Terms of Reference</i>					

² VAT exemption status varies from one country to another. Pls. check whatever is applicable to the UNDP CO/BU requiring the service.

³ UNDP preference is not to pay any amount in advance upon signing of contract. If the Service Provider strictly requires payment in advance, it will be limited only up to 20% of the total price quoted. For any higher percentage, or any amount advanced exceeding \$30,000, UNDP shall require the Service Provider to submit a bank guarantee or bank cheque payable to UNDP, in the same amount as the payment advanced by UNDP to the Service Provider.

Person(s) to review/inspect/ approve outputs/complete d services and authorize the disbursement of payment	Senior Advisor on Renewable Energy, Environment Unit, UNDP Indonesia
Type of Contract to be Signed	<input checked="" type="checkbox"/> professional service contract
Criteria for Contract Award	<input type="checkbox"/> Lowest Price Quote among technically responsive offers <input checked="" type="checkbox"/> Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) <input checked="" type="checkbox"/> Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criterion and cannot be deleted regardless of the nature of services required. Non-acceptance of the GTC may be grounds for the rejection of the Proposal.
Criteria for the Assessment of Proposal	<p><u>Technical Proposal (70%)</u></p> <input checked="" type="checkbox"/> Expertise of the Firm 30% <input checked="" type="checkbox"/> Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan 40% <input checked="" type="checkbox"/> Management Structure and Qualification of Key Personnel 30% <p><i>NOTE: only bidder(s) who received minimum of 70 points where the financial proposal will be opened</i></p> <p><u>Financial Proposal (30%)</u></p> <p>To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.</p>
UNDP will award the contract to:	<input checked="" type="checkbox"/> One and only one Service Provider <input type="checkbox"/> One or more Service Providers, depending on the following factors
Contract General Terms and Conditions ⁴	<input checked="" type="checkbox"/> General Terms and Conditions for contracts (goods and/or services) <input type="checkbox"/> General Terms and Conditions for de minimis contracts (services only, less than \$50,000)
	<p>Applicable Terms and Conditions are available at: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html </p>

⁴ Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.

Annexes to this RFP ⁵	<input checked="" type="checkbox"/> Form for Submission of Proposal (Annex 2) <input checked="" type="checkbox"/> Detailed TOR <input type="checkbox"/> Others ⁶ <i>[pls. specify]</i>
Contact Person for Inquiries (Written inquiries only) ⁷	<p><i>Feby Utari/Yusef Saiful Millah</i> <i>Procurement Unit</i> <i>feby.utari@undp.org/yusef.millah@undp.org</i></p> <p>Mandatory subject of email: RFP/UNDP/ENV-MTRE3/73138/ DETAILED FEASIBILITY STUDY FOR INSTALLATION OF SOLAR-PV HYBRID POWER PLANT IN MANADO TUA & NAIN ISLANDS, NORTH SULAWESI PROVINCE</p> <p>Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.</p>
Other Information <i>[pls. specify]</i>	<ul style="list-style-type: none"> ▪ Format: PDF files only ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted. ▪ Max. File Size per transmission: N/A

⁵ Where the information is available in the web, a URL for the information may simply be provided.

⁶ A more detailed Terms of Reference in addition to the contents of this RFP may be attached hereto.

⁷ This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL⁸

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery⁹)

[insert: Location].

[insert: Date]

To: [insert: Name and Address of UNDP focal point]

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP dated [specify date], and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

A. Qualifications of the Service Provider

The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating the following :

- a) *Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;*
- b) *Business Licenses – Registration Papers, Tax Payment Certification, etc.*
- c) *Latest Audited Financial Statement – income statement and balance sheet to indicate its financial stability, liquidity, credit standing, and market reputation, etc. ;*
- d) *Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;*
- e) *Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, etc.*
- f) *Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.*

B. Proposed Methodology for the Completion of Services

The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.

⁸ This serves as a guide to the Service Provider in preparing the Proposal.

⁹ Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

C. Qualifications of Key Personnel

If required by the RFP, the Service Provider must provide :

- a) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;
- b) CVs demonstrating qualifications must be submitted if required by the RFP; and
- c) Written confirmation from each personnel that they are available for the entire duration of the contract.

D. Cost Breakdown per Deliverable*

	Deliverables <i>[list them as referred to in the RFP]</i>	Percentage of Total Price (Weight for payment)	Price (USD/IDR)
1	1st payment: upon signing of contract and submission of Detail Workplan	20%	
2	2 nd Payment shall be made upon submission and acceptance of Draft Detailed Feasibility report. Draft report should be submitted in Indonesian.	50%	
3	3 rd Payment shall be made upon submission and acceptance of Final Detailed Feasibility study report and presentation material summarizing the result of Feasibility study. Both report and presentation material should be submitted in English and Indonesian versions.	30%	
	Total	100%	

**This shall be the basis of the payment tranches*

E. Cost Breakdown by Cost Component *[This is only an Example]:*

Description of Activity	Remuneration per Unit of Time	Total Period of Engagement	No. of Personnel	Total Rate
I. Personnel Services				
1. Team Leader				
2. Technical Expert				
3. Administrative and Finance				

4.(if any, please specify)				
II. Out of Pocket Expenses (if any, please provide in detail)				
1. Travel Costs				
2. Daily Allowance				
3. Communications				
4. Reproduction				
5. Equipment Lease				
6. Others				
III. Other Related Costs (if any, please provide in detail)				

*[Name and Signature of the Service Provider's
Authorized Person]*

[Designation]

[Date]

Terms of Reference (TOR)

For

DETAILED FEASIBILITY STUDY FOR INSTALLATION OF SOLAR-PV HYBRID POWER PLANT IN MANADO TUA & NAIN ISLANDS, NORTH SULAWESI PROVINCE

A. BACKGROUND INFORMATION

Anchored in the 2030 Agenda for the Sustainable Development Goals (SDGs) and committed to the principles of universality, equality and leaving no one behind, the UNDP has issued the UNDP Strategic Plan 2018-2021 as guideline to help countries achieve SDGs by focusing UNDP's competence and expertise on three sets of development settings:

1. Eradicate poverty in all its forms and dimensions;
2. Accelerate structural transformation for sustainable development (addressing inequalities & exclusions, transitioning to zero-carbon development & building a more inclusive accountable governance system);
3. Build resilience to shocks and crises.

Aligned with the Strategic Plan, UNDP supports the National Government counterpart at the policy and program implementation level, working overall to support country's national priorities to:

- Reduce inequalities, including by gender, to ensure inclusive development;
- Improve access to social protection;
- Improve natural resources management and address issues in climate change mitigation and adaptation for a greener and resilient development;
- Enhanced access to justice and more accountable public institutions.

In alignment UNDP Strategic Plan to reduce inequality, acceleration of access to electricity by using locally available renewable resources is one of feasible interventions. Particularly, because there are about 2,000 villages in Indonesia without sustainable access to electricity and there are 17,000 islands in Indonesia that makes national grid interconnection is costly. Government of Indonesia has been addressing this challenge by allocating state-owned budget for rural electrification programme. However, with limited fiscal capacity the speed of national electrification has been relatively slow. Considering limited capacity of state-budget, it is rationale to support government to mobilize non-state funding and engage private sector investment in electrification programme.

With intention to engage private sector as support to the Government in accelerating access to electricity while increase use of renewable resources, UNDP with funding from the Global Environment Facility (GEF) implements Market Transformation (MTRE3) project as support to the Directorate General for New and Renewable Energy and Energy Conservation (DG-NREEC) of the MEMR. For this purpose, the SEF facility offers technical assistance to conduct renewable energy and energy efficiency project development. Furthermore, Innovative Financing Lab at UNDP has been mobilizing funding from provincial development banks and Islamic Finance (BAZNAS) to fund rural electrification activities, such as in Jambi Province.

With the above context, the objective of this assignment is to conduct detailed feasibility study for installation of solar PV hybrid power plant in Manado Tua and Nain islands in North Sulawesi Province, as way to accelerate access to electricity and to mobilize innovative financing for Sustainable Development.

B. SCOPE OF SERVICES AND EXPECTED OUTPUTS

The objective of this assignment is to deliver detailed feasibility study for installation of solar PV hybrid power plant in Manado Tua and Nain islands in North Sulawesi Province, including distribution and installation system in both islands, which currently using recurrent diesel-based generation system as source for electricity. The outcome of the assignment will directly inform the construction stage as well as provide a baseline situation of targeted communities.

Scope of activities includes:

- Development of detailed-feasibility study approach and time plan showing how the contractor will undertake the scope of works.
- Conduct visits and detailed-feasibility study in project sites
- Assess and design power generation systems and cost estimates for construction of (1) solar-PV mini grid system and (2) Solar PV – Diesel hybrid system.
- Develop report based on the result of visit and elaboration of recommendations.

The final Feasibility Study report should include the following information, but not limited to:

A. *Description of target locations/sites:*

- Access to location from capital city province/district
- GPS coordinates (x, y, z) of:
 - Projected area for construction of centralized solar PV power plant (addressing the ownership status of the land)
 - Geographic center of the site
- Aerial imagery of the distribution of households at each site; including the number of households that are not only scattered but also lie in isolated spots, with reasonable distance from the center of the site.

B. *Socio-economic and environmental aspects:*

- Number of beneficiaries, in terms of total population and number of households.
- Number and type of public facilities.
- Information on current access to electricity status, average monthly cost and mode of payment.
- Information on current access to water and source of water.
- Information on main source of income of inhabitants, average monthly income (the poor and non-poor) & the percentage of population below poverty line;
- Information pertaining to existing village institutions and/or cooperatives;
- Information relating to the receptiveness/willingness of village to the installation of solar PV system, maintaining the facilities sustainably and to contribute financially to the maintenance.
- Check ownership and status of the land to be used for installation of centralized solar PV system.
- Gain commitment letter from land owner for utilization of the land for power plant.
- Conduct environmental risk assessment following acceptable standard.

- Investigate the possibility and need of end use for electricity application including solar irrigation, drinking water and productive economic need of that particular area.

C. Technical aspect:

Technical Assumptions:

The facility that will be constructed and installed in each target site is expected to have following features at the minimum (if appropriate):

- ✓ Technical standard for hybrid system with existing diesel-based power plant of PLN and island grid system.
- ✓ Power per house and public facility is expected 900 VA
- ✓ Energy provided is maximum 3 kWh per day per house.
- ✓ Installation of a prepaid meter system
- ✓ Installation of energy limiter
- ✓ Installation remote monitoring tool.
- ✓ Estimation 30% increase of demand in 10 years
- ✓ Transmission 10% losses at the furthest point.

Required Technical information:

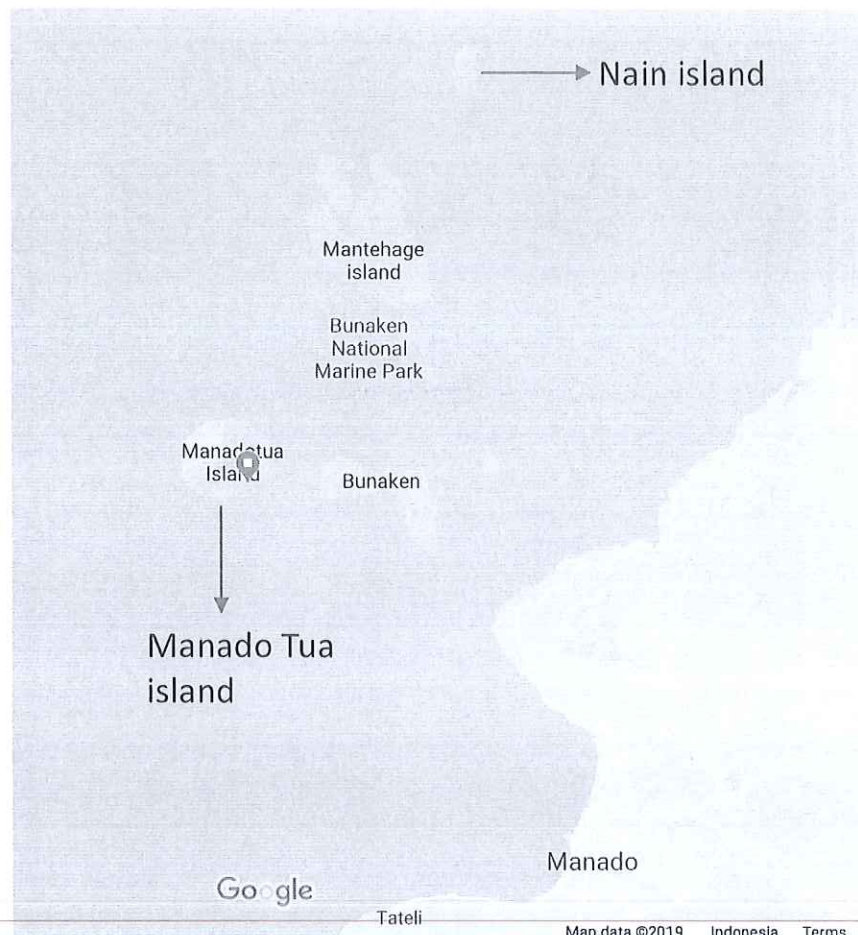
- Carry out the demand survey for the proposed location.
- Analyze and recommend the possibility of national grid-connection within the next 5 years through interaction with local community and PLN.
- Carry out the solar resource assessment and existing diesel power generation system of the proposed area. More specifically, the global horizontal radiation, daily radiation of that particular area.
- Carry out the energy demand and projection of load growth for targeted communities and area.
- GPS coordinates of proposed power house and connections.
- Based on the demand and resource assessment, design major components of solar PV mini grid system. The component information should include minimum of
 - a. Solar array sizing
 - b. Battery sizing
 - c. Inverter sizing
 - d. Charge controller sizing
 - e. Mounting structure design and sizing with consideration of wind loading
 - f. DC and AC cables sizing
 - g. Control, protection and monitoring system type and size
 - h. Conductor sizing for transmission and distribution based on voltage drop, line length, current flow etc.
 - i. The route of Transmission & Distribution (T&D) has to be determine through GPS tracking system which could be later seen from Google Earth too. The total T&D length should be validated based on GPS data.
 - j. Carry out the voltage drop analysis of distribution system. It is advisable not to exceed 10% of voltage drop in any section of transmission distribution line.
 - k. Design of electric pole, insulator, cross arm, stay set and other distribution system component. It is highly recommended to refer PLN's practice of distribution system design.
 - l. Complete basic engineering drawing of project including power house and distribution network.
 - m. Design of lightning system to ensure safety of personal and equipment from lightning.

D. Financial aspect:

- Prepare Bills of Quantities (BOQ) and Cost Estimate of the Project. The design and cost estimate should be technically and economically optimized. All potential optimized solutions should be presented in the final report.
- Financial and economic analysis, sensitivity analysis and risk assessment of the project.

E. Operation and Maintenance

- Estimation of requirement for operationalization and system maintenance.
- Cost estimate for future operational and system maintenance.
- Estimation of feasible payment rate for electricity use/kWh for investment and full grant scenarios.
- Propose a model of project operation suitable for local context.



Picture 1. Location of Manado Tua and Nain islands in North Sulawesi Province.

Under this assignment the selected company is expected to conduct the following activities and deliver outputs:

No	Expected Outputs	Key Activities	Remarks
1	Detail Workplan	Detailed workplan.	Site visit reports can be provided by UNDP if required.
2	Draft Detailed Feasibility report.	<ul style="list-style-type: none"> • Conduct visits and detailed-feasibility study in project sites • Meeting with key stakeholders relevant to the project. • Assess and design solar PV hybrid power generation systems according to the scope of works. 	Draft Feasibility study should be submitted in Indonesian.
3	<ul style="list-style-type: none"> • Final Detailed Feasibility study report. • Presentation material summarizing the result of Feasibility study. 	<ul style="list-style-type: none"> • Finalization of FEED study by taking into account reviewers feedback. • Submission of FEED study. 	Both report and presentation material should be submitted in English and Indonesian versions.

F. INSTITUTIONAL ARRANGEMENT

The selected company will work closely and under supervision of Senior Advisor for renewable energy, UNDP Indonesia, Environment Unit.

UNDP will provide project's site visit report to the selected company and to have further consultation regarding the project – if necessary.

UNDP MTRE3 and UNDP Innovative Financing Lab will facilitate selected company to liaise with key stakeholders of the project and to conduct review of the submitted Feasibility study report by involving qualified reviewers.

The Ministry of Energy and Mineral Resources will provide guidance and participate in reviewing the submitted Feasibility study report.

G. DURATION OF WORK

The assignment will cover for approximately 90 (ninety) working days from 06 January 2020 to 06 May 2020.

Detail estimate timetable as below:

No	Expected Outputs	Expected Submission Date
1	Detail Workplan	14 January 2020
2	Draft Detailed Feasibility report.	13 March 2020
3	<ul style="list-style-type: none">Final Detailed Feasibility study report.Presentation material summarizing the result of Feasibility study.	6 May 2020

The above timetable has considered lead time needed by the ministry and UNDP to review outputs, provide feedback and certify on the outputs/works completed. Delay on the completion of the work might affect total budget approved unless it is due to reasons beyond the selected organization's control thus close coordination with the supervisor from UNDP and written notification should always be used to anticipate any delay

H. LOCATION OF WORK

The selected company will be required to visit Manado Tua and Nain islands in North Sulawesi Province and in Jakarta for coordination and consultation with UNDP and MEMR.

NOTE: the travel expense, cost of accommodation and venue for those activities mentioned above should be part of bidder's proposal (technical and financial) using 2019 SBM rate.

I. QUALIFICATION OF THE SUCCESSFUL SERVICE PROVIDER

- **Institutional Experience:**

- At least 3 years of working experience in conducting feasibility study and basic engineering design for solar PV power plant project.
- At least 3 years experiences working in Indonesia, providing service to International organization and Government is an advantage.
- Registered company with valid license to operate the business in Indonesia.

- **Personnel Experience:**

1. **A Team Leader** with minimum Master Degree in engineering, specifically in renewable energy is an advantage, with minimum 8 years relevant working experience. The team leader should have sufficient experience in team managerial, planning skills and reporting.
2. **A Mechanical and Electrical Engineer** with Master degree in engineering and 2 years of experience or Bachelor degree and 6 years of experience in engineering.
3. **A Solar Power Engineer** with Master degree and 2 years of experience or Bachelor degree and 6 years of experience in engineering.
4. **A Financial analyst** with Master degree and 2 years of experience or Bachelor degree and 6 years of experience in economy, finance or management.
5. **A Socio-Environmental risk analyst** with Master degree and 2 years of experience or Bachelor degree and 6 years of experience in science, environmental engineering or economy.

- **Competencies and skill requirements:**

Each personnel team should have the following competencies and skill requirements:

- Strong analytical, writing & communication skills and fluency in the English language.
- Strong motivation & ability to work & deliver under short deadlines.
- Focuses on impact & result for the client & responds positively to critical feedback.
- Able to work independently with little or no supervision.
- Familiarity with government system is strongly desired.

J. **SCOPE OF PROPOSAL PRICE AND SCHEDULE OF PAYMENTS**

A result-based budget proposal shows amount required to achieve each expected output and a breakdown of cost of inputs for each activity to be carried out for a given output should be submitted. The budget should also specify cost component items, i.e: professional fees, travel, living allowances, etc.

The schedule of payment will be made as per following timetable:

No	Deliverables	Timeline	Instalment
1	1st payment: upon signing of contract and submission of Detail Workplan	14 January 2020	20%
2	2 nd Payment shall be made upon submission and acceptance of Draft Detailed Feasibility report. Draft report should be submitted in Indonesian.	13 March 2020	50%
2	3 rd Payment shall be made upon submission and acceptance of Final Detailed Feasibility study report and presentation material summarizing the result of Feasibility study. Both report and presentation material should be submitted in English and Indonesian versions.	6 May 2020	30%