TERMS OF REFERENCE
ICLEI - Local Governments for Sustainability

Development, design and engineering of a ready-to-finance renewable energy project

Hiring of an individual and/or legal entity to provide consulting services for the development, design and engineering of a ready-to-finance Renewable Energy project for the West Nusa Tenggara Province, Indonesia within the framework of the project 100% Renewables: Cities and Regions Roadmap.

Type of contract: Product

August 2023
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1. About ICLEI - Local Governments for Sustainability

ICLEI - Local Governments for Sustainability is a global network of more than 2,500 local and regional governments committed to sustainable urban development. With activities in more than 125 countries, we influence sustainability policies and drive local action for circular, equitable, resilient, nature-based and low-carbon development.

ICLEI Southeast Asia

ICLEI Southeast Asia Secretariat (ICLEI SEAS), based in Manila, Philippines, currently serves ICLEI Members in Indonesia, Malaysia, the Philippines, and Thailand. Established in 1999, ICLEI SEAS began its work in the region with the Cities for Climate Protection (CCP) campaign in the Philippines, which was expanded to Thailand and Indonesia in 2002. Since then, ICLEI Membership has grown rapidly in these three countries, leading to the establishment of the Indonesia Office in 2013 and adding Malaysia into the fold in 2014. In 2016, ICLEI SEAS started its presence in Vietnam and Laos.

ICLEI SEAS assists Member local governments by designing, promoting, and drawing external support for programs and campaigns that develop local resiliency and sustainability. We enter partnerships in order to build a regional and national policy environment that strengthens local governments and promotes local sustainability. We bring local government leaders together with experts, industry leaders, academics, and national international agencies for exchanges on potential solutions to a wide range of urban challenges.

Over the past years, ICLEI SEAS has gained recognition for its efforts in empowering cities in Southeast Asia. It continues to inspire local action for regional and global sustainability.

2. About the 100% Renewables Cities and Regions Roadmap Project

The project **100% Renewables Cities and Regions Roadmap project** (called in this document 100% RE - official website: [https://renewablesroadmap.iclei.org/](https://renewablesroadmap.iclei.org/)) is implemented by **ICLEI - Local Governments for Sustainability** and funded by the German Federal Ministry of Economics and Climate Protection (BMWK) through the International Climate Initiative (IKI).

The 100% RE Project provides support to local and regional governments to promote progress towards 100% renewable energy strategies with increased awareness and stakeholder participation in the countries of Kenya, Indonesia and Argentina. The 100% RE Project works with cities and regions in the selected countries to build a pathway for cities in the global south to finance and implement renewable energy by assessing local RE potential as well as developing ready-to-finance (bankable) projects.

According to the IRENA Coalition for Action, "renewable energy encompasses all renewable resources, including bioenergy, geothermal, hydropower, ocean energy, solar energy and wind energy. One hundred percent renewable energy (or 100% RE) means that all energy sources to meet all end-use energy needs in a given location, region or country are derived from renewable energy resources 24 hours a day, every day of the year. Renewable energy can be produced locally to meet all local end-use energy needs (electric power, heating and cooling, and transportation), or it can be imported from outside the region using supporting technologies and facilities such as power grids, hydrogen, or hot water. Any storage facility that helps balance the energy supply must also use energy derived only from renewable resources."
In Indonesia, the 100% RE Project has been implemented in the West Nusa Tenggara Province as the deep dive region, and in Mataram City and Sumbawa Regency as networking cities since 2019. This collaboration is based on an agreement between the West Nusa Tenggara Provincial Government and the ICLEI Indonesia Office regarding the Development of Renewable Energy Resources in West Nusa Tenggara Province with reference number 415/75a/KSS/2020, which was signed by both parties on March 30, 2020.

The activities of the 100%RE project are centered around the following work packages: 1) multi-level stakeholder engagement at the national level, 2) empowering local governments and key stakeholders, 3) developing strategies and action plans for renewable energy transition; 4) providing technical expertise to support the development of priority projects into financeable projects, and 5) consolidating methodologies, guidance and resources, with dissemination.

This Terms of Reference (ToR) relates to work package 4, and requests the services of a service provider (individual consultant or consortium) to develop the identified concept into a ready-to-finance project that will assist West Nusa Tenggara, Indonesia in attracting funding from local, national and/or international investors. This project’s objective, of efficient and effective mobilization of financial resources from the private and public sector, is critical to implementation of renewable energy (RE) and energy efficiency projects that accelerate the transition to 100% RE.

The county has an active Project Implementation Team (PIT) composed of representatives of different county departments as well as national agencies who have been working on project identification, project prioritization, data collection and will support the implementation of the project on the ground.

3. Region context: West Nusa Tenggara Province

West Nusa Tenggara Province was chosen as a deep dive region for the “100% Renewables Cities and Regions Roadmap” project. This will enable the region to accelerate the transition to renewable and support regional targets to meet Net Zero Emission by 2050.

West Nusa Tenggara province is divided into two major islands, Lombok Island and Sumbawa Island, with a total population 5,070,385 people. Sumbawa Island has an area of 15,414.50 km² which comprises two-thirds of the land area of the province. Meanwhile, Lombok Island comprises the majority of the province’s population and is home to the province’s capital – Mataram City.

Based on the data from PLN UIW NTB, as of the end of 2022, the capacity of renewable energy in WNT was recorded at 40.52 MW, accounting for 4.09% of the total electricity production. This utilization includes solar at 1.74%, hydro at 2.2%, and biomass at 0.15%. The remaining sources of electricity are coming from fossil-based energy sources such as coal, gas and diesel, which account for more than 96% the electricity share.

West Nusa Tenggara has various potential renewable energy sources, including wind, tidal, solar, geothermal, biomass and hydropower. According to the 100% Renewables: Energy System Modelling Results for West Nusa Tenggara, Indonesia developed by Fraunhofer ISE, it is possible to achieve 100% renewable energy utilization in WNT by 2050 using local resources along with additional technologies such as electric stoves, biogas, methanisation, green hydrogen and energy storage.

4. Justification and objective of the consultancy

One of the biggest challenges faced by WNT is to move from energy transition planning to action, how to mature an idea/concept into a project, understanding its technical and financial characteristics so that it can finally be implemented, monitored, replicated and reviewed.
To respond to this challenge and move towards the transition to renewable energy, the selected consultancy/individual must develop the technical (development, design and engineering) and financial (evaluation of business models and financial modeling) aspect of the proposal so that the WNT can implement the priority actions identified in the Roadmap, allowing it to have a first economically profitable renewable energy project, with positive social and environmental impacts.

Through participation in the 100% RE Project and the development of the Roadmap to reach 100% RE, WNT Province has carried out a process of prioritization of projects to make way for the search of financing and business opportunities for their implementation. Taking into account the context of the region, its local renewable potential, access to renewable technologies, their costs, the development of the renewable technology market in the region, the WNT Province has selected **52.8 kWp rooftop solar PV power plant at Karang Taliwang Public Health Center, Mataram City** as a project for technical-financial development within the framework of this consultancy service.

The main objective is to provide consulting services for the design, engineering and development of the selected 52.8 kWp rooftop solar PV power project in the building of Karang Taliwang public Health center, the search for financing for Mataram City, West Nusa Tenggara Province, within the framework of the 100% Renewables Cities & Regions Roadmap project.

To this end, the technical assistance provided seek to identify and understand possible sources of financing, ownership structure and business models that fit the local and national reality, permitting and regulatory compliance and enabling connection to the electricity grid if needed, negotiation (approvals, permission and licensing requirements) with PT PLN, environmental, social and financial risks in the project stages, enabling conditions, among other fundamental aspects in the structuring and formulation of this as a ready-to-finance (bankable) project. At the same time, the consultancy is expected to contribute to the generation of contacts with financial institutions and strategic actors for the implementation of the project.

In addition, the project aims to contribute to capacity building, involving the city in this process, in order to understand and replicate the steps of a bankable project so that it can take ownership and move forward in the implementation of its 100%RE Roadmap.

The work carried out by the Consultant shall enable the network city of Mataram to position a Project to be financed.

### 5. Products

The work was divided into 6 deliverables, with an estimated maximum duration of 4 months. The deliverables are:

- **Output 1**: Development of work plan and methodology.
- **Output 2**: Technical structuring of the project
- **Output 3**: Identification and evaluation of business models
- **Output 4**: Financial modeling of the project
- **Output 5**: Identification of relevant funding institutions and establishment of contracts
- **Output 6**: Capacity building

The outputs must be delivered in both Bahasa and English.
5.1. Output 1: Work plan and methodology

Objectives
Propose a work plan and a feasible methodology, considering the main dates of the project, the objective and the different products detailed in this TOR.

Activities
- Update of the work plan presented in the submitted application, proposing changes, if necessary, regarding activities and dates.
- Consolidate and present the proposed methodology of the work, with details of each of the products (tools, models, processes, among others, must be presented).

Deliveries
- 1.a. Work plan (Document in doc and .pdf format)
- 1.b. Methodology of work (as described on the appendix)

5.2. Output 2 | Technical structuring for implementation of a rooftop solar project in Mataram City (Detailed Project Report)

Objective:
Detail the technical specifications (legal, environmental and social) required for the development of the 52.8 kWp rooftop solar PV power plant in Karang Taliwang Public Health Center in Mataram City.

Activities:
- Identification of relevant (including but not limited to the pre-requisite information such as load assessment, site study, capacity estimation, etc.) information for the development of the project in collaboration with ICLEI and local partners.

- Technical visits and site assessment to evaluate the rooftop's structural integrity, orientation, and shading conditions, solar resources analysis and system design including the battery back-up.

- Gather relevant information from various interviews, meetings with WNT’s government, ICLEI and local-national stakeholders on the required information.

- Development of technical details of the project: suitable capacity, technology, number of solar panels, inverters, electronic panels, battery sizing, array power (kw), connectors, wiring, meters, monthly and annual generation (kw/h), grid connection mechanisms, type and quantity of equipment, costs, complementary works, required surface, diagrams, plan.

- Identification of the studies, procedures, permits, registration forms, and complementary information from the technical (e.g., structural analysis, network connection analysis), legal, environmental (e.g., environmental permits or licenses) and social (e.g., strategies for communication and dissemination of the project to the community, equipment necessary for installation, maintenance) points of view required for project start-up: for example, structural analysis, network connection analysis, environmental impact study, risk study, network connection permits, among others. The time and costs of each stage of the project must be estimated.

- Follow-up meetings with the Mataram City, WNT Government and ICLEI.
Deliveries:

2.a Minutes of the visits and meetings carried out for the development of this product.

2.b Document (word/pdf and/or excel) with the list of procedures, permits, necessary technical, legal, environmental and social studies, estimating costs and times, and what is required for the start-up, operation and maintenance of the rooftop solar project in Mataram City.

2.c Detailed Project Report (DPR) containing the Descriptive Report of the project (files in doc format, Excel and the final version in PDF format). It must include:

- Description and general objective of the project
- Technical description: rooftop solar PV power plant description; plant capacity, selected technology and justification; description of design standards; grid connection point; costs; investment amount; project life time, number of solar panels, inverters, battery sizing, electronic panels, array power (kW), connectors, wiring, meters, monthly and annual generation (kWh), type and quantity of equipment, costs, complementary works, required surface, diagrams, plans
- Studies, services and human capital required during the installation, start-up, operation and maintenance of the rooftop solar.

2.d Detailed engineering drawings: JPG and DWG format, presented in an adequate scale to allow a perfect understanding of the project. The final version must be submitted in PDF format.

2.e Executive summary of the technical project. Maximum of 10 sheets (to be submitted in doc and pdf format).

5.3. Output 3 | Identification and Evaluation of business models

Objectives

Identify and evaluate different business models (advantages, disadvantages, clients, costs, risks) that are feasible in the Indonesia context, and that guarantee the long-term sustainability of the project.

Activities:

- Compilation and review of necessary data, such as business opportunities and models, exploration of financing instruments and financing mechanisms, among others that are necessary to meet the product's objective. Exploration and identification of triple impact financial instruments, such as the issuance of green bonds, carbon markets that contribute to the development of a competitive project in the energy market and are sustainable in the long term.
- At least 2 business models identifying: relevant actors in each model, clients, advantages, disadvantages, benefits, affordability, cash flows, risks (credit, investment), among other parameters to assess the viability and applicability in the context of Indonesia. Models such as public-private partnerships, leasing, development banks, private equity funds, among others.
- In the identified models it is important to evaluate the cost of investment, operation and maintenance costs, and find cost benefit in installing rooftop solar.
- Multi-criteria evaluation of business models and identification of the best business model.
• Involve different actors in this analysis (citizen participation, civil society, private actors e.g. solar IPPs, PT PLN, national, provincial, local government, financial entities, others.

• Presentation of the identification and evaluation of the business models to Mataram City, WNT Province, ICLEI and relevant stakeholders deemed necessary through a meeting.

Deliveries:

• 3.a. Presentation document of the two identified business models, inclusive of cash flow model with projections, assumptions, and sensitivity analysis among others, (Excel spreadsheets, documents in doc/pdf format and others) that are feasible in the context of West Nusa Tenggara Province and Indonesia and that allow the sustainability of the project in the long term.


• 3.c. Minutes of all meetings conducted.

5.4. Output 4 | Financial modeling and feasibility assessment for project implementation.

Objective:

Develop a financial scheme to structure the selected project, taking into account the technical characteristics defined in Product 2 and the business model selected in Product 3.

Activities

• Generate a list of the main possible sources of financing, both national and international.

• Generate a list of strategic public and private stakeholders at the local, national and international levels for the implementation of the project.

• Identification of term conditions, restrictions on amounts, guarantees, restrictions, steps and requirements for access to financing.

• Establish contact with potential stakeholders interested in financing the project (aligned with ICLEI and the city of Mataram and West Nusa Tenggara Province) to present the project and gather information necessary for the realization of this product.

• Identification of credit and investment risks.

• Check the availability of credit rating or credit score of the project owner(s), if not available, then a provision for acquiring a credit rating and/or credit score for the Project Owners should be provided in the CAPEX. This credit rating/score must be recognised at national and international level as it is vital to attracting investors.

• Analysis of the financial feasibility of the project, considering the life cycle of the system, initial investment, operation and maintenance costs and financial cost (if applicable, interest amount).

• The model and feasibility analysis should have the following minimum content:
  ○ (I) financial modeling including cash flow forecasting, debt coverage ratio, rate of return, CAPEX, OPEX, depreciation costs and life cycle.
  ○ (II) business model analysis using Net Present Value, Payback Period, Internal Rate of Return (IRR) or Levelized Cost of Electricity (LCOE).
  ○ (III) risk assessment matrix, including political and regulatory risks;
When necessary, organize and conduct meetings with the city team, local institutions and ICLEI for data collection and information validation. Meetings may be online or face-to-face, according to prior alignment with ICLEI and local government.

- Presentation of the results to ICLEI and the city of Mataram and West Nusa Tenggara Province.
- Adjustment of the financial evaluation, based on stakeholder feedback.

### Deliveries

- **4.a** Minutes of the meetings and visits carried out for the consolidation of this product (to be submitted in doc and pdf format).
- **4.b** List of strategic stakeholders (to be submitted in doc and pdf format).
- **4.c** Model and feasibility analysis report (Version 1). Maximum of 15 sheets (to be submitted in doc and pdf format).

#### 5.5. Output 5 | Business Matchmaking Event

**Target**

Conduct a matchmaking event with stakeholders interested in financing Karang Taliwang Public Health Center.

**Activities**

- Consolidation of the list of stakeholders to be contacted: financing institutions, investors (angel, impact, venture capital, equity and debt), relevant private sector stakeholders and key public sector stakeholders (national or subnational government), technology and service providers, etc. interested in the project and/or in financing any of the stages of the life cycle of the project necessary for its execution (concept development, pre-feasibility, feasibility, DPR, implementation, operation & maintenance).
- Preparation of a Concept Note of the event to be held. The document should be validated with the ICLEI team and adjusted, if necessary.
- Organization and participation in the project presentation event. The event may be virtual or face-to-face, prior alignment with ICLEI.
- Executive summary of the project, consolidating products 1, 2, 3, 4 and 5.

**Deliveries**

- **5.a** Concept note of the event, with a list of actors to be invited (to be submitted in doc and pdf format).
- **5.b** Summary record of the event (delivery must include narrative report with main milestones and results of the event, photos, videos).
- **5.c** Executive summary of the project, including the main findings of the product 1, 2, 3 4 5.

#### 5.6. Output 6 | Capacity building

**Objective**

Raise local capacities for the development of bankable energy projects.
Activities:

- Identification of main topics to be covered during the training session, in agreement with ICLEI.
- Preparation of a Concept Note of the training session.
- Preparation of the training materials needed for the training session.
- Conducting the training session (1) (virtual or hybrid).
- Preparation of a Summary report of the event/s.

Deliveries:

6.a Concept Note of the training program. Document with training program and details described. (to be submitted in doc and pdf format).

6.b Presentation of training materials (PPTs, documents) in Bahasa and English

6.c Summary record of the event (delivery must include a list of participants and their affiliation, brief summary report of the outcomes of the training, and if possible photos or videos.

Note: The training must be conducted in Bahasa; however the materials should be provided in both Bahasa and English.

6. Time period

Interested parties are required to submit a detailed work plan for each output and by-products (1a, 1b, 2a, 2b, etc.). The work plan must comply with the following deadlines (accounted from the signing of the contract) for the completion of each stage and presentation of deliverables:

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7. Instructions for the development of the work

7.1. Inputs provided by ICLEI

- Project description document;
- Preliminary list of actors and financial institutions in Indonesia;
- Relevant documents and/or information produced in the framework of the 100%RE project, which may be of interest.

7.2. Copyright

All parts (studies, reports, research, information or other materials, including graphics, files, documents and electronic data) produced as a result of this Term of Reference (including originals and files on digital media) shall be the property and use of ICLEI - Local Governments for Sustainability (ICLEI World Secretariat, ICLEI Southeast Asia Secretariat, ICLEI Indonesia Office), without prejudice to the recognition and identification of the Contractor as the author of the products in question.

7.3. Work monitoring

- The work will be developed under the coordination and technical supervision of ICLEI Southeast Asia particularly of its Indonesia Office.
- The work will be carried out in coordination with the city of Mataram and West Nusa Tenggara Province, and the Contractor must also participate in meetings with the focal point with the accompaniment of ICLEI Southeast Asia -Indonesia Office.
- Technical supervision of activities will include review and approval of activities and deliverables, and regular remote meetings to monitor the work with the Contractor.

8. Value of the contract

The maximum value of the proposal must not exceed EUR 40,000 in total. Payments will be made upon delivery of the products after receiving the approval of the responsible area:

- Output 1: 20% of the total budget 10 days after products validation;
- Output 2 and 3: 30% of the total budget 10 days after products validation;
- Output 4, 5 and 6: 50% of the total budget 10 days after products validation.

The corresponding invoice will be required and must be sent to the e-mail iclei-indonesia@iclei.org. Payment will be made by issuing a bank receipt by the SERVICE PROVIDER with the due date of 10 working days after the approval of the product, and the issuance of the corresponding invoice to the email address iclei-indonesia@iclei.org. It is mandatory to issue an invoice for a value equal to the value of the payment taking into account all taxes stipulated in the tax legislation and differentiating each of them in the invoice itself.

9. Submission of proposals

To participate in the selection, please send us the following:

- **Curriculum Vitae** of the professionals involved - 1 PDF document of up to 2 pages for each person. It should be named "100 RE-Financeable Project-First Name Last Name"; The professional(s)
in charge of the project must be enrolled in the corresponding professional association, according to the specialty and professional responsibilities enabling the development of energy projects. Fluency in Bahasa is required for this assignment.

Note: In the case of Legal Entities, a photocopy of the business license or the establishment deed of CV, PT, Foundation, or similar entities must be attached, along with the duration and the articles of appointment registered in the general list.

- **Project References**: Three works or projects developed by the contractor (company/consortium or individuals) related to the topic (maximum 2 pages per work/project), in the format of your choice but including at least: name of the activity/project, specific role within the project of the company/consortium or individuals participating in the ToR, objectives achieved, amount of the project awarded to the contractor, timeframe, activities developed, funder, partners (if applicable). It must be named: "100RE-Financeable Project_Portfolio", if it is available on a platform, send the link in the body of the email;

- **Document**, following the attached model. It should be named "100RE-Financeable Project-Proposal". It must contain the following information:
  - **Work plan**, proposing the steps that will be developed for the fulfillment of the activities throughout the contract period. Indicating the start and end date of each activity and its respective responsibility. It must be considered that ICLEI needs two (2) weeks to review the materials delivered. It is not required to submit the same format, but the proposal must contain the information included in the model in the Annex.
  - **Methodology**: Describe in an organized and coherent manner, the steps, tools, models, software and strategies required to meet the objectives, activities and deliverables of this ToR. The methodology should be consistent with the Work Plan. An understanding of the ToR and the ability to translate them into a workable methodology must be shown. Up to 2 pages.
  - **Budget proposal**, presenting the details of the general costs, including all legal charges according to the model provided. It is not required to submit the same format, but the proposal must contain the information that is included in the model in the Annex.

Items should be sent as an attachment. Submissions can be in **English and/or in Bahasa**. Incomplete proposals (without all the items listed above) or in formats other than those specified will not be considered. Proposals must be sent by 23h59 (GMT+7) on 8th September 2023, to iclei-indonesia@iclei.org and keep in copy Siti Koiromah - siti.koiromah@iclei.org with the subject "100RE_ Consultant for Financeable Proposal".

If you have any questions, please contact iclei-indonesia@iclei.org.

10. **Selection criteria**

Proposals will be evaluated according to the financial amount submitted.

For classification purposes, the criteria will be adopted:

- Analysis of CV and portfolio, considering experience in Indonesia - 40%.
- Analysis of the Work Plan and methodology - 30%.
● Analysis of the budget proposal - 30%.

The shortlisted consultants will undergo an interview, which will determine the hiring. Only companies selected for the interview stage will be contacted.

The company that does not submit any of the documents requested in the previous point will be automatically eliminated.

11. Annexes

Sample Work Plan and Budget: Wokplan_Bankable Proposal.