



TERMS OF REFERENCE

ICLEI – LOCAL GOVERNMENTS FOR SUSTAINABILITY - AFRICA

Project preparation and development of a ready-to-finance Sustainable energy project

ICLEI Africa seeks to appoint a professional service provider to provide consulting services for the development, design, engineering and financial matchmaking of a ready-to-finance Renewable Energy and Energy Efficiency project for the county of Kisumu, Kenya, within the framework of the 100% Renewables Cities and Regions Roadmap project.

Issue date: 14 August 2023

Bids due: 8 September 2023

Please indicate interest to submit a proposal and any queries by 23 August 2023, so responses to queries may be shared with all bidders. Proposals will still be accepted if interest is not indicated, however bidders must accept that they may not receive responses to questions from other bidders.





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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.

Our Network, together with a team of experts, works to provide access to knowledge and partnerships and to build capacity for systemic change in urban sustainability.

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

The **100% Renewables Cities and Regions Roadmap project** (referred to in this document as '100% RE', official website: <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(RE) and energy efficiency (EE) measures by assessing local RE and EE 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."

Energy efficiency is a critical foundation for successful integration and implementation of renewable energy. It primarily helps to reduce energy demand, and attendant benefits of this includes reducing energy bills, lowering greenhouse gas emissions thereby contributing to national and global climate goals, reducing the need for additional infrastructure to meet energy needs, and creating jobs locally.

The activities of the 100%RE project are centred 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.



Since the start of the project, several activities and developments have taken place for the transition towards 100% renewables. The Roadmaps (Work package 3) present an articulation between the vision, objectives, goals and proposed actions, beyond demonstrating the pathways and deployment mechanisms necessary for actions to be implemented in the short, medium and long term. Within this framework, special support is provided to the county of Kisumu to seek financing for the implementation of one sustainable energy project in the County as foreseen in its Roadmap.

This Terms of Reference relates to work package 4, and requests the services of a service provider (individual consultant or consortium) to provide expertise to Kisumu county in Kenya — to develop one identified concept into a ready-to-finance project that will assist the county 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* 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. County context: Kisumu

Kisumu County lies to the west of Kenya, between longitudes 33°20' East and 35°20' East and latitude 0°20' South and 0°50' South. It covers approximately 567km² on water and 2086 km² land area. It is bordered by 5 other counties - Homa Bay, Nandi, Kericho, Vihaga and Siaya, as well as Lake Victoria. There are 7 sub-counties (Kisumu East, Kisumu West, Kisumu Central, Muhoroni, Nyando, Seme and Nyakach) and 35 wards.

The major economic activities in the county include subsistence farming, livestock keeping, fishing, rice farming, sugar cane farming, and small-scale trading. Large industries in Kisumu are involved in grain milling and processing, cotton milling, brewing, and sugar production

The main sources of energy within Kisumu County are grid power and small solar home systems for lighting, and for cooking, firewood, charcoal, paraffin and LPG are used. The grid electrification at 2019 was about 52.6%, and grid supplies meet about 77% of the county's electricity demand.

From a 2019 report, about 8.3GWh of energy was consumed by public institutions like schools and health facilities. 96 institutions, under the county's administration, were surveyed on their access to energy for cooking and heating. The survey showed low access to clean cooking in the sector with only 14% using LPG for cooking. It also revealed that 64% of learning institutions (mainly primary schools) and hospitals heavily rely on firewood for cooking.

The healthcare facilities serving Kisumu residents include the Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) - which also serves 9 other counties in the Western Kenya region, 7 county hospitals and 14 sub-county hospitals. There are also a number of dispensaries owned by the county government which provide medical care services for residents. Energy audits carried out between 2016 – 2019 showed that hospital facilities rely on the national grid and diesel generators for electricity.



4. Context and objective of the consultancy

One of the biggest challenges facing cities 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 transition towards renewable energy, Kisumu county through its participation in the 100% RE project has carried out a process of prioritization of projects to make way for the search for financing and business opportunities for their implementation. Considering (in the context of Kisumu County) the different projects' environmental and social impacts, readiness to implementation, economic models, alignment with national and regional priorities, replicability potential and capacity at local level, the County has selected a **'Renewable Energy and Energy Efficiency & Conservation in county facilities'** project for technical-financial development within the framework of this consultancy service.

Thus, the selected service provider is required to provide technical and financial support so that Kisumu county can have an economically-profitable energy project, with positive social and environmental impacts. The main objective is to **provide technical and financial consulting services for the development, design, detailed engineering and financial matchmaking of the selected project**, within the framework of the 100% Renewables Cities & Regions Roadmap project. **The overall aim of this piece of work is to have an investment-ready project proposal to attract local and international funding for project implementation.**

Project overview:

Title: Renewable Energy and Energy Efficiency & Conservation in county facilities

Scope: The project involves implementing renewable energy, energy efficiency & conservation measures with a focus on 4 measures - solar water heating, LED lighting, clean cooking solutions and solar PV & storage- in up to 22 healthcare facilities in Kisumu County,

Objective: The project aims to enhance sustainable energy transition in Kisumu county facilities, through implementation of sustainable energy practices and technologies, ultimately contributing to GHG emissions reduction, fossil fuel divestment, energy savings, cost savings and improved operations in these institutions.

Impact: Potential impacts of the project implementation include:

Environmental impact - Reduction of GHG emissions through reduced energy consumption and less fossil-fuel quantities for generators

Social impact - Improved healthcare service delivery for the 392,000 Kisumu residents.

Economic impact - Cost savings for the County through reduced utility bills

Alignment with local and national plans:

The project is aligned with the following: National Energy Efficiency and Conservation Strategy (NEECS) 2020, Energy Act 2019; National Energy Policy 2018, Kisumu City Sustainable Energy Policy 2021, County Integrated Development Plan (CIDP) II 2018 - 2022; Integrated National Energy Planning Framework.

Implementation readiness:

Best practices are available, existing capacity at the county-level and potential in-country service providers for audits have been identified.



Economic model:

Savings in operational expenditure to cover capital expenditure.

The county implementation team estimates that measures can decrease power bills by 30-60% annually

Preliminary work conducted so far:

Energy audits have already been conducted in 7 out of the 22 healthcare facilities:

- Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) with a 710-bed capacity - audited in 2016-2017;
- 5 county hospitals - Kisumu County Hospital, Muhoroni County Hospital, Nyakach County Hospital, Kombewa County Hospital, Ahero County Hospital (estimated 60 bed capacity - to be confirmed) - audited in 2017-2019
- 1 sub-county hospital - Chulaimbo sub-county hospital - audited in 2019-2020

Opportunity for:

- 1 extra county hospital: Rabuor County Hospital
- More sub-county hospitals

Our objective is to develop a ready-to-finance project focused on renewable energy, energy efficiency and conservation measures that fosters sustainable energy practices and contributes towards Kisumu County's 100%RE Roadmap, with a focus on **solar water heating, LED lighting, clean cooking solutions and solar PV & storage.**

5. Outputs

The scope of work divided into 4 outputs within an estimated maximum duration of 14 weeks is presented as follows:

Output 1: Development of a work plan

Output 2: Technical structuring of the project

Output 3: Economic analysis and financial modeling of the project

Output 4: Development of a funding strategy & financial matchmaking

5.1. Output 1: Development of a work plan

Objectives

Propose a work plan, considering the main dates of the project, the objective and the different deliverables detailed in this ToR.

Activities

The work plan activities to achieve the objectives mentioned are as follows:

- Task identification: Break down the project objective into specific tasks and activities, considering the different deliverables from this ToR.
- Task sequencing: Arrange the identified tasks in a logical sequence, ensuring that dependencies and prerequisites are taken into account.



- Resource allocation: Determine the required resources, both human and material, for each task and allocate them effectively to achieve project objectives efficiently.
- Establish deliverable schedule: Set deadlines for each deliverable, ensuring they align with the project timeline and client expectations.
- Identify responsible parties: Assign responsibilities for each task to team members or relevant stakeholders, ensuring clarity and accountability.
- Monitoring plan: Create a plan for regular monitoring of project progress.

Deliverables

- 5.1a: A updated work plan (breaking down the project objective into specific tasks and activities and sequencing of the tasks, and resource & cost allocation, bearing in mind the expected deliverables from this ToR)
- 5.1b: Deliverable schedule
- 5.1c: Timeline of project monitoring and evaluation meetings/calls: 1 mid-project & end-of-project.
- 5.1d: Participation at an inception meeting to present the work plan to the Kisumu County, ICLEI Africa and other relevant stakeholders (including national government representatives (Ministry of Health), & representatives of the Kisumu County Health Department)

5.2. Output 2: Technical structuring of the project

Objective:

1. Review of 7 existing audits for 4 identified measures that are common across the audits: solar water heating, LED lighting retrofit, clean cooking solutions and solar PV & storage solution.
2. Consolidating 7 existing audits for the 4 identified measures.
3. Detail engineering, design and modeling (if needed) of identified measures.

Activities:

1. Review of 7 existing audits:

- Review documentation: Carefully examine the original audit reports, including the methodology, data sources, and findings, to gain a comprehensive understanding of the assessment.
- Data verification: Verify the accuracy of the data used in the audit, ensuring that measurements and calculations are correct and consistent.
- Review potential major changes: Conduct discussions with the County to verify if there have been any significant changes in major equipment and appliances that could have impacted the energy profile of the facilities; and conduct facility assessments for the 4 identified measures where needed.
- Validation Report: Prepare a validation report summarizing the findings and any discrepancies or adjustments made during the validation process.



- Recommendations: If any discrepancies or gaps are identified, propose corrective actions or additional steps to address the issues and improve the accuracy of the audit.
- Updates: Update cost of implementing recommendations

2. Consolidating 7 audits:

- Standardize data and metrics: Ensure that data and metrics used in the different audit reports are standardized to allow for direct comparison and consolidation.
- Address discrepancies: Address any discrepancies or inconsistencies found in the individual audit reports to present a unified and accurate picture.
- Consolidation plan: Develop a plan for consolidating the audit reports, including the order of presentation and the structure of the consolidated report.
- Data integration: Integrate relevant data from each audit report into a consolidated database or spreadsheet.
- Synthesize key findings: Summarize the key findings from each audit, highlighting the most critical areas for improvement.
- Combine recommendations: Combine and prioritize energy efficiency recommendations from each audit to create a comprehensive list of actionable measures.
- Analyze standards: Analyze national and international standards for Renewables and the Energy Efficiency measures in Healthcare facilities

3. Engineering and design of the 4 prioritized measures

- Engineering and Design: Develop detailed engineering plans and designs for the selected renewables and/or energy efficiency measures:
 - Solar water heating
 - LED lighting
 - Clean cooking solutions
 - PV system to serve lighting loads and clean cooking, if applicable (for electric stoves) as well as battery storage for emergency loads in cases of grid unavailability.

This requires site visits and may involve collaborating with engineers, architects, and other relevant experts.

- Simulation and Modeling: Predict the performance of the proposed energy efficiency measure(s).
- Stakeholder Engagement: Involve relevant stakeholders, such as building occupants, facility managers, and decision-makers in the process. Get their feedback and support for the proposed measure(s).
- Identification of required studies, permits, and costs for project start-up: Identify the studies, procedures, permits, registration forms, and complementary information from the technical (e.g., structural analysis, equipment necessary for installation, maintenance), legal, environmental (e.g., environmental permits/licenses, environmental impact study) and social (e.g., strategies for communication and dissemination of the project to the community) points of view required for project start-up, among others. The time and costs of each stage of the project must be estimated. An updated risk assessment should be included.



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

Deliverables:

- 5.2a: Validation report summarizing the findings and any discrepancies or adjustments made to the audits
- 5.2b: Consolidated review of 4 measures with associated potential of electricity/wood consumption savings, updated implementation costs, and CAPEX allocated
- 5.2c: Validation workshop with the County and ICLEI
- 5.2d: Minutes of the visits and meetings carried out for the development of this product
- 5.2e: Document with the list of best practices applicable to the identified locations
- 5.2f: Detailed Project Report for design and engineering must include:
 - o Description and general objective of the project
 - o Detailed engineering plans and designs for the selected energy efficiency and measures
 - o Studies, services and human capital required during the installation, start-up, operation and maintenance of the measures
 - o Updated risks and mitigation measures
 - o List of strategic stakeholders for project implementation
 - o Executive summary of the technical project. (Maximum of 10 pages to be submitted in doc and pdf format).

5.3. Output 3: Economic analysis and financial modeling

Objective:

Develop a financial scheme to structure the selected project, taking into account the technical characteristics defined in Deliverable 2.

Activities

- Validate scope of project: In consultation with ICLEI and the County, assess the optimal approach to maximize the potential for attracting investment to determine whether a single measure per project, or a combination of 2 or more of the 4 identified measures within a single project would be more suited to potential funders' requirements and priorities.
- Investigate business models: Conduct a comprehensive analysis of business models that can be applied to the project
- Data collection: Gather all relevant economic data with sources (including cost of debt).
- Formulate hypotheses: Develop hypotheses or assumptions that will guide your analysis and modeling.



- Construct the economic model: Develop an economic model that represents the relationships between the key variables.
- Financial Modeling: Build a financial model that incorporates the economic model and relates it to the financial outputs of the project.
- Sensitivity analysis: Conduct sensitivity analysis to assess how changes in key variables affect the outcomes of your financial model. This helps understand the model's robustness and identifies critical assumptions
- Scenario analysis: Perform scenario analysis to explore different potential outcomes under different funding structures. Develop various scenarios involving CAPEX, with the option of including or excluding supplementary audits, taking in account the replication and scaling opportunities. Analyze each hospital as an individual project, then consolidate the 7 hospitals holistically as one project. Separate out the 4 measures while keeping them under the broader cash-flow framework to showcase the potential for synergistic cost allocation through consolidation. Include a scenario where CAPEX includes the cost of running additional audits and implementing measures on the specific selected measures for additional hospitals.
- Document findings: Prepare a comprehensive report detailing the methodology, data sources, key assumptions, model specifications, and the results of the analysis.
- Present the findings: Discuss with the County of Kisumu, ICLEI and other relevant stakeholders the approach, assumptions, and any limitations associated with the analysis.
- Integrate feedback: Adjustment of the financial evaluation, based on stakeholder feedback.

Deliverables

5.3a: Financial model with the following **minimum content**:

(I) financial modeling including CAPEX, OPEX, depreciation costs and life cycle as well as a cash flow forecasting with different funding scenarios (grant, debt, funding from the county, combination of those)

(II) model analysis using Net Present Value, Payback Period, Internal Rate of Return for the different scenarios

(III) Sensitivity analysis

(IV) Scenario matrix

5.3b: Findings summary

5.4. Output 4: Development of a Funding strategy & financial matchmaking event

Objectives

Identify and evaluate funding strategies in the Kisumu context, and that guarantee the long-term sustainability of the project. Prepare documentation to present the project to potential funders and conduct discussions.

Activities:

- List of Possible Financing Sources: Generate a list of the main sources of financing, both national and international.



- Consolidation of the list of stakeholders to be contacted: including financing institutions, investors, relevant stakeholders interested in the project and/or in financing any of the stages of the project life cycle (concept development, pre-feasibility, feasibility, implementation, operation & maintenance).
- Determine terms, conditions, and requirements for financing: Identification of term conditions, restrictions on amounts, guarantees, restrictions, steps and requirements for access to financing.
- Preparation of a Concept Note of the project presentation event to be held. The document should be validated with the ICLEI team and adjusted, if necessary.
- Engagement of potential stakeholders and project presentation: Establish contact with potential stakeholders interested in financing the project (aligned with ICLEI and the county of Kisumu) to present the project and gather information necessary for the realization of this product. The project presentation event could be virtual or in-person.
- Obtain and establish a recognized credit rating: Check the availability, if not, then acquiring a credit rating for Kisumu County. This credit rating must be recognised at national and international level.
- Initiate discussion with potential funders: Plan and run bilateral meetings with the potential funders, outside the project presentation event.

Deliverables:

- 5.4a: List of possible financing sources and of stakeholders to be contacted.
- 5.4b: Presentation document (and slides) of the funding strategy with different options that are feasible in the context of Kisumu and Kenya and that allow the sustainability of the project in the long term.
- 5.4c: Concept note of the event, as well as a post-event summary record (including a narrative report with main milestones and results of the event, photos, videos).
- 5.4d: Minutes of bilateral meetings with potential stakeholders and funders
- 5.4e: Investment-ready project concept note/proposal
- 5.4f: Executive summary of the project, including the main findings of the different deliverables

6. Timeline

Considering the project's deliverables and general schedule, it is estimated that the development of the activities will take a maximum of **14 weeks, from September to December 2023**.

	SEP	OCT	OCT	NOV	NOV	DEC	DEC
Output 1: Development of a workplan							
Output 2: Technical structuring of the project							
Output 3: Economic analysis and financial modelling							
Output 4: Development of a Funding strategy & financial matchmaking event							



Notable dates:

- 14 August 2023:** Terms of Reference issued
- 30 August 2023:** Response to bidders' queries
- 08 September 2023:** Deadline for submission of proposals

7. Inputs provided by ICLEI Africa and Kisumu county

- Project description document
- Conducted audits on healthcare facilities;
- Relevant documents and/or information produced in the framework of the 100%RE project, which may be of interest

7.1 Work monitoring

- The work will be developed under the coordination and technical supervision of ICLEI Africa
- The work will be carried out in coordination with the County of Kisumu, and the Service provider must also participate in meetings with the county focal point(s) with the accompaniment of ICLEI Africa
- Technical supervision of activities will include review and approval of activities and deliverables, and regular remote meetings to monitor the work with the service provider.

8. Date and value of the contract

The duration will depend on the work proposal submitted, with a maximum term of **14 weeks after signing the contract**, and will be agreed upon between the parties during the signing, as well as any adjustments to products and deadlines.

The maximum value of the proposal must not exceed **60,000 Euros**.

9. Submission of proposals

The professional service provider has the flexibility to respond and address the entire Terms of Reference (all deliverables) either individually or through a consortium. If applying as a consortium, the leading company should be clearly stated.

Kindly send the following to participate in the selection:

- **Curriculum Vitae** of the key members of the team/consortium - 1 pdf document of up to 2 pages for each person. It should be named "**100RE-Project Preparation-First Name Last Name**";
- **Project list and contact references for at least three works or projects developed by the service provider** (company/consortium or individuals) **related to the topic** (maximum 1 page 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-Project Preparation-Portfolio**".



- **Company/organisation registration document(s)** and/ or certificate of incorporation in the main country of operation for companies forming the consortium.
- **Proposal document:** It should be named "**100RE-Project Preparation-Proposal**" and must contain the following information:
 - **Work plan** proposing the steps that will be developed for the fulfilment of the activities throughout the contract period. Indicating the start and end date of each activity and the responsible party/team member.
 - **Methodology:** Describe in an organized and coherent manner, the steps and strategies required to meet the objectives, activities and deliverables of this ToR. Up to 2 pages.
 - **Budget proposal:** A detailed budget breakdown must be submitted, indicating hourly/daily rates, number of hours/days per section of the work, as well as any other costs necessary to fulfil this assignment.
 - **Risk assessment** identifying key risks and mitigation measures should be included. Not more than 2 pages.

Interested bidders can send a confirmation of interest and enquiries to Ms Stephanie Canac - stephanie.canac@iclei.org with Dr Azizat Gbadegesin - azizat.gbadegesin@iclei.org copied in, before 23 August 2023 so that all responses can be shared with other bidders by 30 August 2023..

The proposal and supporting documents (as attachments) should be submitted to Ms Stephanie Canac - stephanie.canac@iclei.org with Dr Azizat Gbadegesin - azizat.gbadegesin@iclei.org copied in by **23:59 SAST on Friday 8 September 2023**. Use the subject line: "**100%RE project in Kenya - Renewable energy and Energy efficiency project proposal**".

10. Selection criteria

Bids will be evaluated according to the following criteria:

- Demonstrated understanding of the ToR and work required to deliver the assignment
- Qualifications and skills of the experts in the service provider's team
- Demonstrated experience of the service provider's team
- Detailed budget
- For South African companies, a copy of the BBBEE certificate must be provided

Annex

The audits for the following hospitals:

- 1 referral hospital - Jaramogi Oginga Odinga Teaching and Referral Hospital
- 5 other county hospitals - Kisumu County Hospital, Muhoroni County Hospital, Nyakach County Hospital, Kombewa County Hospital, Ahero County Hospital
- 1 sub-county hospital - Chulaimbo Hospital

Can be found here:

<https://drive.google.com/drive/folders/1CUmq12FaQtxldi6g-PKszVtAFExrt1D?usp=sharing>