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# 100% Renewables Cities and Regions Roadmaps

## Multi-level Governance Dialogue Report

13 July 2022

Microsoft Teams





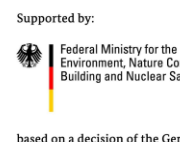
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# 1. Background to the project and objectives of the dialogue

One of the key steps in the 100% RE project is to cultivate multi-level governance through policy dialogues and workshops in order to strengthen capacities of key stakeholders and encourage the development of enabling frameworks at the national, regional and local levels to unlock renewable energy (RE) and energy efficiency (EE) potentials.

Under the auspices of the 100% RE project, a virtual Multi-level Governance (MLG) Dialogue was held on the 13 July 2022 in order to create a space for mutual exchange and understanding between representatives from the two levels of governments (national, county) as well as the private sector, Non-Governmental Organisations (NGOs), research organisations, academia and development partners. The MLG Dialogue brought together stakeholders to discuss possible political support measures, financing and direct actions that could facilitate the RE landscape and possible RE development plans of the project's focus counties of Kisumu (deep-dive county), Nakuru and Mombasa (network counties).

## 2. MLG dialogue notes

### 2.1 Welcome and Opening

Engineer Stephen Nzioka (P.Eng.Tech), Senior Deputy Director of Renewable Energy at the Ministry of Energy (MoE), Kenya, welcomed participants to the MLG Dialogue on the country's transition to 100% Renewable Energy. He explained that Kenya is determined and on track to achieve the full transition to clean energy by the year 2030, and clean cooking by 2028.

The 100% RE project supports Kenya's Nationally Determined Contribution (NDC), and the MLG Dialogue will enable understanding of what needs to be achieved through establishing a common roadmap. Eng. Nzioka expressed his wish for a productive dialogue to ensure clear outputs towards 100% RE.

The session was moderated by Mrs Dania Petrik from ICLEI Africa (AS) who provided an outline of the agenda and explained the Talanoa process of inclusivity through exploring *"where we are now, where do we want to get to, and how do we get there?"*


### 2.2. Session 1: Purpose of the MLG Dialogue

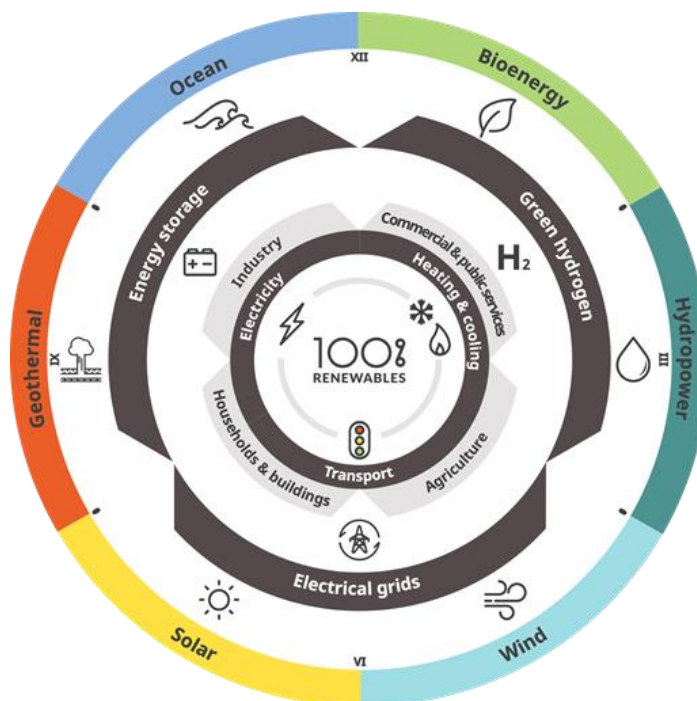
#### 2.2.1. Overview of the 100% RE project

A presentation was given by Ms Sharin Govender (Project Manager) from ICLEI AS on the background of the 100% RE Project and how it meets the climate action goals of Kisumu County and Kenya, noting that cities and regions themselves can lead the renewable energy transition using their unique position and authorities.

For the purposes of the project, the definition of 100% RE was outlined as follows:



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*“Renewable energy encompasses all renewable resources, including **bioenergy, geothermal, hydropower, ocean, solar and wind energy**. One hundred percent renewable energy means that all sources of energy to meet all end-use energy needs in a certain location, region or country are derived from renewable energy resources **24 hours per day, every day of the year**. Renewable energy can either be produced locally to meet all local end-use energy needs (power, heating and cooling, and transport) or can be imported from outside of the region using supportive technologies and installations such as **electrical grids, hydrogen or heated water**. Any **storage facilities** to help balance the energy supply must also use energy derived only from renewable resources.”*

-IRENA Coalition for Action

Figure 1. Definition of 100% RE, IRENA

This definition of 100% RE aligns with Kenyan policies. Sharin emphasised that local action is critical to align with developmental and spatial planning imperatives. In addition, it is at the local level where demand arises from, therefore local governments are ideally placed to facilitate bottom-up RE development. However, setting targets at the local level can be challenging due to the unique formation and functions of local governments and the cross-cutting nature of RE thus requiring a multitude of stakeholders and actions.

Cities participating in the 100% RE project include Avellaneda (Argentina), West Nusa Tenggara Province (Indonesia) and Kisumu County (Kenya), with Mombasa County and Nakuru County participating as network counties in Kenya. Figure 2 provides a snapshot of the aims of the project.



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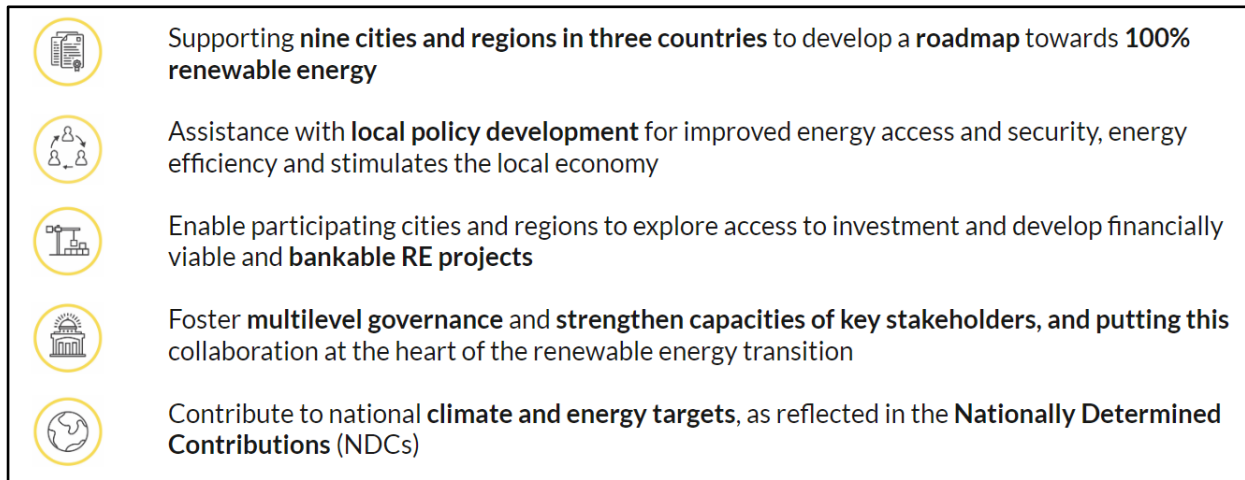


Figure 2. The 100% Renewables Cities and Regions Roadmap

Figure 3 illustrates the logic of implementation for the project.

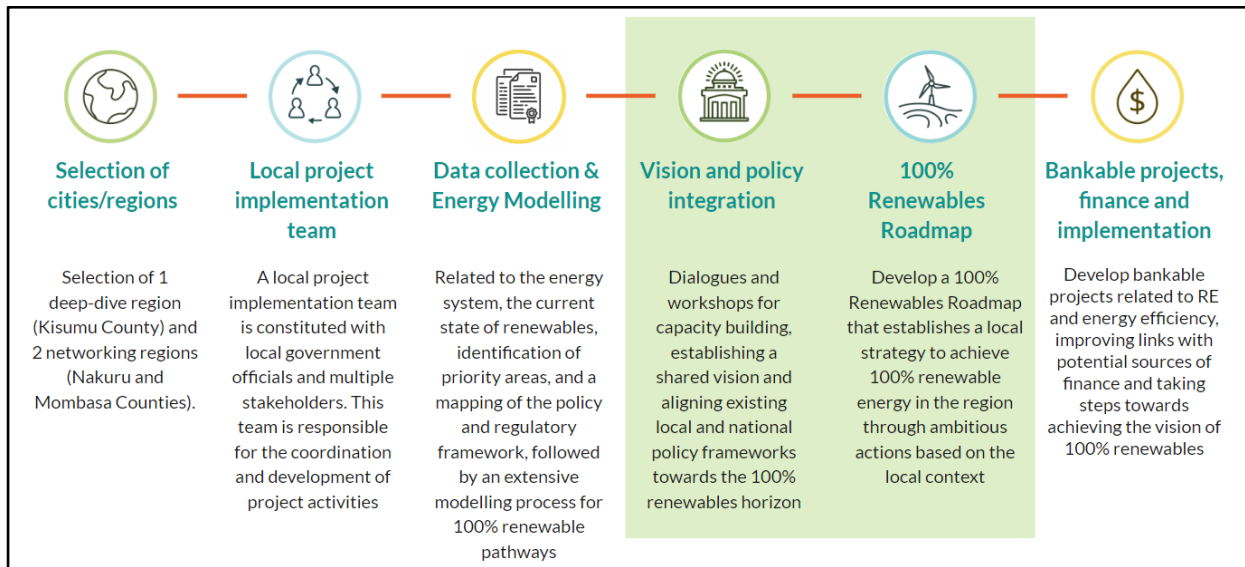


Figure 3. Logic of project implementation

Kisumu County offers advantages from being a strategic economic hub and growth point in Kenya for industrial expansion and agro-economic potential. Sharin noted that it is important to unpack the current energy landscape in Kisumu, including access to energy, and opportunities for Renewable Energy (RE) development. Some key figures are:

- 85.9 % of energy is currently generated from RE;
- 52,6 % households have access to grid connection; the country is targeting 90% by 2030;
- High reliance on non-motorized and public transport. Also a sector that generates the most greenhouse gas emissions (GHGE).
- Gap in access to energy



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Planning at county level is key to ensure the correct transitions happen for 100% RE uptake to meet 2030 and 2050 targets. The energy modelling undertaken for Kisumu County revealed abundant RE potentials and show that the conditions are conducive. There is a strong policy impetus to link RE and reducing GHGs for climate action to work. It is noted that Kisumu County recently adopted their **Integrated Climate Action Plan** which sets out the strategies, plans and actions for a sustainable and low greenhouse gas (GHG) emission development, while including climate adaptation actions and ensuring access to secure, affordable and sustainable energy. Mitigation pillar targets and actions include increased energy access, clean cooking solutions, stationary energy (RE and EE), transport and waste.

Sharin concluded by emphasising that RE development happens within a system, and the role of multi-stakeholder partnerships must be amplified. The basis of it all needs to be coordination, which this dialogue aims to achieve.

### 2.3. Session 2: Where are we currently?

This session aimed to unpack the current context and overview of the local energy landscape. The session started with a presentation by Engineer Nzioka who shared the Kenyan context, followed by Mr Oganga who did the same for Kisumu county.

#### 2.3.1. The National Context

Eng. Nzioka shared a presentation on the national level 100% RE Policy (Energy Policy 2018), and explained that geothermal, hydro, wind and solar energy are key resources. Renewable energy accounts for 77% of the energy mix in the country and 93% of energy dispatched to customers is renewable.

**The Energy Policy 2018** is an integral policy to drive the transition to 100% RE, and potentials for RE are largely untapped. Government is supporting Solar PV electrification of public institutions, including schools and health facilities. So far, 1,500 institutions have been electrified. Three large renewable energy projects have been launched in recent years, including 51 MW Garissa Solar Power Plant (November 2018), 310 MW Lake Turkana Wind Power Plant (March 2019), and 100 MW Kipeto Wind Power Plant (July 2021).

Off-grid systems are important if we want to reach 100% RE as there are areas that would take a long time to reach these underserved counties. Kenya, with support from the World Bank, is implementing the Kenya Off-grid Solar Access Project (KOSAP), which aims to provide clean energy access to 14 under-served Counties through 151 mini-grids, electrification of boreholes, solar home systems and clean cooking solutions.

In an effort towards implementing clean cooking, the MoE developed the National Bioenergy Strategy (2020), which has the ambitious target of **100% adoption of clean cooking fuels by 2028**. Government is working with the Clean Cooking Association of Kenya (CCAK) to implement the strategy, which seeks for full transition to clean cooking (fuels and technologies) such as bioethanol and biogas use in 50% of the households and increased LPG adoption. The government has been running the development and promotion of improved efficiency stoves for households and



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institutions. A clean cooking component of KOSAP seeks to disseminate 150,000 stoves for households in the selected under-served counties.

Kenya has developed a **National Energy Efficiency and Conservation Strategy (2020)**, which seeks 3% annual reduction in energy intensity up to 2025, and considers minimum performance standards (MPS) from 6 to 10 on lighting and household devices. Furthermore, 25% of all new buildings are required to be green buildings. The strategy is the main reference for industrial GHG emission reduction through efficient use of energy.

Eng. Nzioka concluded by expressing his thanks to ICLEI and the 100% RE programme for supporting Kenya's drive towards 100% RE by 2030.

### 2.3.2. The Local Context

Mr Joseph Oganga from Kisumu County, Chief Officer at the Department of Energy and Industrialisation, provided background information on the energy targets and challenges for Kisumu county. He provided an energy profile for the county, noting that for electricity:

- 60% of households are using grid electricity, while 39% use solar systems.
- 77.39% of the population (households, SMEs and institutions) access grid electricity while 19.25% are from individually installed solar systems.
- 3% of electricity sources are from diesel/petrol from standby generators used as backup mostly in institutions and SMEs.
- In terms of clean cooking, most people use charcoal (35,90%), firewood (21,30%) and LPG (21, 30%).

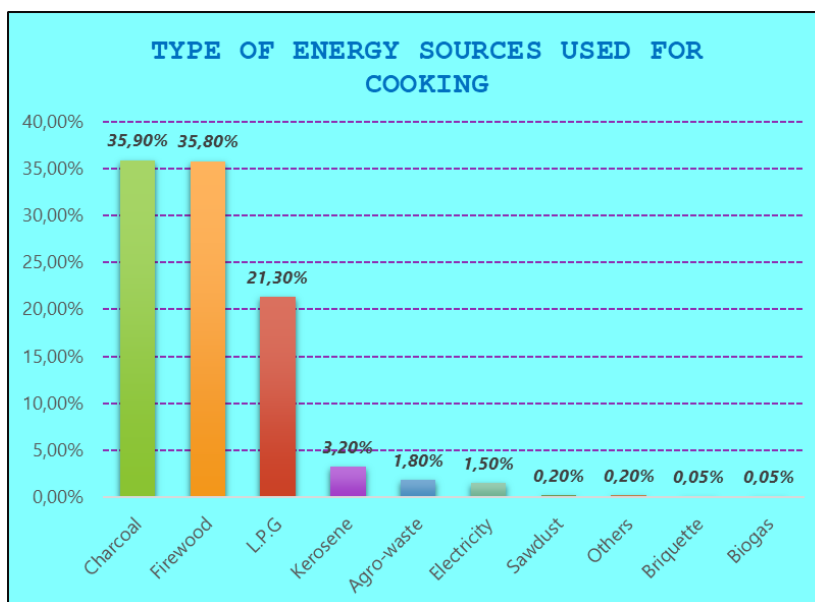


Figure 4. Type of energy sources used for cooking in Kisumu, Source: The Access to Energy Assessment (A2E) study, 2021





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He explained that there are various key projects under implementation:

- Rural electrification in collaboration with RREC. The County commits to allocate funds in every FY to support electrification of underserved villages.
- Clean Cooking programme in collaboration with development partners and local NGOs. The e-cooking hub was recently launched in Kisumu by the African Centre for Technology Studies (ACTS) to serve the western region of Kenya.
- Flood & street lighting to promote a 24 hour economy and security in markets and other public utilities.
- Installation of mini/ micro-grids to support underserved county facilities. Target areas are markets, water & health facilities.
- Energy Conservation & Efficiency measures. We conduct Energy Audits and implement audit reports in selected government facilities. Kisumu recently won the Energy Management Awards 2022 organised by The Center for Energy Efficiency and Conservation under the Kenya Association of Manufacturers.
- Development of the **County Energy Plan (CEP)**. The plan is currently under review to conform with the Integrated National Energy Plan (INEP) framework.

The County Government of Kisumu (CGK) has prioritised sustainable, affordable and reliable energy as per **County Integrated Development Plan II (CIDP II)**, ADP 2022/23 with specific targets and goals. They are committed to implement domestic implementation of the National Energy Policy (2018) and the **Bioenergy Strategy (2020)**, with the target to increase local electrification rate to 90% by the end of 2022 to ensure increased energy access, as well as universal access to clean cooking by 2028.

Mr. Oganga noted that ICLEI-Africa supported the County to develop a 100% RE Vision and is in the process of developing a roadmap towards implementing 100% RE for the county.

He listed the following as some of the main **challenges** that the county faces at local level, in terms of implementation of renewable energy projects and activities:

- Inadequate resources to implement RE & Climate Change projects.
- Inadequate technical capacities on specialised RE technologies.
- Inadequate knowledge of the community to propose RE & Climate Change projects and programs during public participation.
- Inability to sustain projects - due to low funding.
- Inadequate data to support energy modelling & County Energy Planning (CEP).
- The supply of grid electricity is unreliable and expensive.

There are, however, also various **opportunities** and Mr. Oganga made mention of the following:

- Abundant sunlight throughout the year suitable for Solar energy. An average of solar Insolation of **5.5kWh/m<sup>2</sup>/day and sunshine duration of 6.5 hrs**. Kisumu County lies astride the equator.



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- Abundant biomass materials e.g. bagasse from three functional sugar factories and husks from rice fields.
- Potential for wind power. 3% of the total area of the country experiences annual mean wind-speeds more than 6 m/s at 100m above ground.
- Existence of rivers with potential of hydro power production e.g. River Nyando marked for 5MW hydro power generation as an output of Koru-Soin Dam.
- Existence of municipal waste suitable for Waste-2-Energy projects.
- Collaboration and partnerships with development partners and the private sector.

### 2.3.3. The financing landscape for RE in Kenya

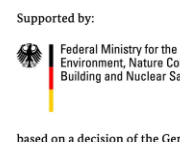
Dr Olumfunso Somorin, the Regional Principal Officer for Climate Change and Green Growth from the African Development Bank (AfDB), spoke about the financing landscape for RE in Kenya. He indicated that we have heard about the energy policy and the RE potential which is very positive. However, Kisumu County has only 63% grid connection, while more under-developed counties have an even lower rate of grid connectivity, so energy access is still a major concern for the country.

The **AfDB has made large investments in RE** across the continent with a portfolio of around \$12 billion in projects, of which between 90-95% of these projects are renewable energy projects. They have also funded successful energy projects in Kenya, such as the 310 MW Lake Turkana Wind Power Project and the 105 MW Menengai Geothermal Development Project. These successful projects not only enable greater energy production for the grid, but supports progress around the institutional and enabling framework for attracting finance. We have made tremendous progress over the years when it comes to finance for RE and money is flowing, even if it is not enough yet. Dr. Somorin noted that these flows are not just from public and development finance sources, but also that private funding that is being invested into energy access for the country, thanks to the enabling conditions for it in Kenya.

It is, however, important to take this beyond energy access to see how we can address global mitigation goals and ultimately NDC implementation. *"We have been successful in Kenya due to the fact that we have a **blended finance approach with both public and private funding**, creating opportunities to implement related climate change activities, which is very concessional, and these activities can then access additional funds. Blending of resources helps us to mitigate the risk associated with large-scale RE projects, and brings in the private capital. We need to see RE as a solution to our energy and climate crises"*, Dr. Somorin said.

Despite all the effort that is going into building the grid, there will always still be underserved areas that need a strategy which considers both **off-grid and mini-grid investment options** enabled through private capital. The AfDB supports off-grid investments through private capital, so they have created the Facility for Energy Inclusion (FEI) to make small-scale mini-grid or off-grid investment very possible.

Dr. Somorin went on to emphasise that, regardless of investments, it is essential to ensure that **electricity is affordable**. Thus, it is not just about coverage or access, but also about affordability,



so it may drive an economic and social transformation. *“We need to review the household cost of energy and what percentage of their income goes towards energy, to be able to understand the true value of energy access”*, he said.

Mrs Petrik thanked speakers for the overview of the policy and financing for Kenya and Kisumu, and proceeded to introduce the next session where participants split into break-out rooms.

### 2.3.4. Gaps and opportunities (break-away rooms)

A question for discussion was raised about where/what are the gaps and opportunities for financing RE at county level as highlighted by the national policy and finance landscape for RE; and what are the relevant barriers and enablers for the policy, financing and actor landscapes respectively? Table 1 captures a summary of the responses from the two groups.

Table 1. Summary of group 1 and 2 responses from break-out session 1

Group 1	Group 2
<b>GAPS</b>	
<ul style="list-style-type: none"> <li>● Political climate not supportive and prioritisation of the energy sector</li> <li>● Development and formulation of policies are capital intensive, requiring funding.</li> <li>● Inadequate community participation in energy planning processes. Expensive to get adequate public participation</li> <li>● At the national level, unclear roles and responsibilities. At the county level, not much priority is given to this and energy is often under the environment department.</li> <li>● The role of the county with respect to energy planning and implementation is not very clear.</li> <li>● Financing process: Bureaucracy of getting financing for projects at county level. The national government has to guarantee financing of projects in the county. It is a challenge to get funding from international sources directly to counties</li> <li>● Lack of the domestication of the Energy Act and adoption by counties. Need for</li> </ul>	<ul style="list-style-type: none"> <li>● William: No defined policy for how the private sector can engage with the public sector, or no holistic policy for PPPs and projects for RE at the local level. There needs to be local level policies to reduce the cost of RE for clients, and this must include collaboration with banks.</li> <li>● Sharin: Are there adequate incentives and policy certainty to promote RE development and reach bankability?</li> <li>● There are incentives from a banking/private sector perspective. From the public sector, there are little incentives to drive bankable projects.</li> <li>● The Central Bank issued guidelines on climate risk management. We are developing policies in this regard. The Treasury released incentives for climate risk taxation by private banks. Looking at areas of investment and increasing share of asset share in RE portfolio. Incentives to increase this. Policies within the banking sector and disclose progress on</li> </ul>



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<p>County officers to undertake capacity building for the development of policies.</p> <ul style="list-style-type: none"> <li>• The Act says the national government is supposed to do RE assessments / studies in the counties to assess energy generation potential, but this has not actively been done.</li> <li>• The county governments are not defined as Energy Actors, but are rather implementers of the plans. The Act defines how actions / activities of the Energy actors will be financed. County governments are given roles, but not given means of how these actions will be financed.</li> <li>• Planning is very important. 100% integration in planning.</li> <li>• Lack of knowledge and information sharing platforms between national and local actors.</li> <li>• Counties will be able to identify their needs, challenges which can enable them to seek external funding.</li> </ul>	<p>sustainable financing initiatives. Incentives from the public sector.</p> <ul style="list-style-type: none"> <li>• Laban: Banks usually invest where they will get returns. Hence, ADB focus is on mega-projects. However, the problem is that we need financing for smaller/community scale projects where the impact lies, especially in the cooking sector is required. How can the private sector come in and solve problems that face communities directly?</li> <li>• William: How much of the county energy plan and access to energy plan/reports have been shared with SMEs/corporate organisations/micro-financiers within the county. If SMEs have concrete business plans for mini-grids for a community for example, this is something that we could potentially finance. Can also leverage DFI finance that are geared towards SMEs and impact investments. How can we partner to disseminate information to ensure businesses can boost their own growth and solve issues that are faced by Kisumu county residents.</li> <li>• The constitution provides for decentralisation of services.</li> <li>• Investment in energy demand projects / infrastructure projects required, as well as data on energy demand and needs.</li> <li>• Use of home-grown RE technologies at the local level can be improved.</li> </ul>
<b>OPPORTUNITIES</b>	
<ul style="list-style-type: none"> <li>• The county needs help in developing policies, which needs to be followed by regulations to guide implementation. eg, the energy policy 2018 and the Act 2019</li> </ul>	<ul style="list-style-type: none"> <li>• Develop holistic policies for RE. Share county plans with SMEs/LME to attract investment.</li> </ul>



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<p>and then regulations at the national level. If these are not domesticated, it becomes difficult to implement their roles. Mainly because each county is unique.</p> <ul style="list-style-type: none"> <li>• Look at the devolved functions within the Energy Act and pick the responsibilities as defined for planning and implementation.</li> <li>• Integrating the energy policies into all sectors because energy is an enabler.</li> <li>• Come up with a platform to support partnerships and collaboration.</li> <li>• Opportunities to get funding: e.g. some counties are still using diesel generators for water pumping, hence this could be solarised.</li> <li>• Counties can power all streetlights by RE.</li> <li>• Resource mobilisation for research and development.</li> <li>• Community participation models</li> </ul>	<ul style="list-style-type: none"> <li>• Develop incentives at the local county level</li> <li>• Financing for mega-projects exists as well as DFI financing. If SMEs have a good business case, financing is possible, especially for mini-grids</li> <li>• Constitution and national policies provides clear guidance on roles</li> <li>• Using local technology will promote funding from the county for RE projects</li> </ul>
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Volunteers from each group provided a brief summary of their groups discussions in plenary before commencing with the next session.

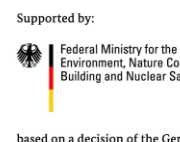
### 2.4. Session 3: Where do we want to go?

This session had a futuristic outlook and aimed to discuss how we get to 100% RE and what our energy goals should be. It also explored what 100% success looks like. Ms Carine Buma provided an overview of the numerous advantages of moving to RE e.g. more affordable, supports energy access, etc., and highlighted the importance of creating a guiding vision and setting targets. She stated that proper planning is needed and setting goals and targets is an integral part of this on our journey to 2030 and 2050.

Carine mentioned that the Visioning Workshop explored the vision and targets for Kisumu County in three different sectors (energy, transport and clean cooking), and this session summarises where Kisumu County is and invites network counties to reflect on their transition goals.

#### 2.4.1. 100% RE success - Kisumu County

Mr Oganga presented the Kisumu County 100% RE Vision statement, which is **“to achieve universal access to reliable and affordable 100% RE for sustainable development in Kisumu County by 2050.** He explained that for the modelling scenarios, we considered high demand and high fuel prices



as key variables. In order to understand where we need to get to, we need to look at what needs to be overcome for 100% RE to be achieved. This was listed as the following:

- Financial challenges
- Improve technical capacities for staff, community and all stakeholders
- Cost of certain RE products
- Development of relevant policies to support the transition
- Full implementation of existing related policies e.g. Climate Change policies & Action Plans
- Enforcement of regulations

In this 100% RE journey, some of the identified critical partners we need to work with are:

- NG energy entities e.g. KPLC, REREC, EPRA etc.
- Development partners e.g. ICLEI-Africa, PA, Expertise France.
- Research & academic institutions ACTs, Local Universities
- Financial institutions e.g. Commercial Banks, Micro finance institutions
- Local NGOs & CBOs
- CSOs
- Community

How can national government, financiers and other stakeholders assist the county on this journey?

- Direct financial support
- Capacity building
- Information sharing
- Creation of demand for RE
- Lobbying for resource allocation county & NG treasuries

What policy mechanisms are required?

- County Energy Plans
- Energy regulations
- Financial regulations

#### 2.4.2. 100% RE success - Nakuru County

Mr Anthony Kamau from Nakuru County presented their energy goals, RE opportunities and challenges. He conveyed that Nakuru has various opportunities to provide RE solutions to citizens that lead to improved services and cleaner energy for lighting, heating and clean cooking.

Some of the barriers in terms of implementation of renewable energy are weak policies, so we are grateful that we are working on policy planning and undertaking our County Energy Plan. We also have a lack of a platform to showcase energy solutions so they can be embraced. Not just for citizens, but also for businesses to showcase solutions to investors. In addition, people do not know about alternatives and just know the traditional options, and there are limited resources to invest in mass awareness creation and empower people.



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Based on an access to clean cooking study, 46.4% of people in the county depend on biomass in the county and they have no alternatives. People are willing to walk distances to fetch firewood and gas is perceived to be expensive. He further stated that there are large land areas that are not zoned for agriculture, and public spaces can be used to install solar energy. Geothermal exploration is taking place in Naivasha and Menengai, however it is not a devolved function in Kenya at the moment. There is also an opportunity for solarisation of street lighting, especially since many streetlights are not working and do not stay on for a long time after they were installed. Nakuru County would also like to have RE hubs and centres, and there is a need to support feasibility studies for RE projects.

In addition, Nakuru is looking at the development of various RE policies and plans. First, they would like to pursue a customised framework and roadmap to encourage RE adoption in all sectors. County energy plans should look at clean energy solutions for the poor, specifically in rural areas. We should also encourage green building policies and initiatives, including solar power. The current policy is outdated and new solutions are needed.

Anthony concluded by stating that national government can support with MOUs which helps local agencies to engage with foreign governments. Further, energy prices are not regulated at the county level, but counties can provide input to encourage affordable solutions and facilitate the transition. Regulated prices need to address the bigger picture of sustainability.

Some of the critical partners that we need to work with to ensure broader buy-in and support:

- Partners who can support the county to voice their concerns
- Community members
- National agencies, Geothermal explorers in KenGen
- Estate developers - natural lighting is not adequate in some developments. If we had collaboration with them, we can build greener buildings and have efficient cooling and heating and lighting solutions, etc.
- Sister departments at the County - anchor RE to all relevant sister departments e.g. tourism, transport and pursue NMT and solar streetlighting.
- Financiers
- NGOs

#### 2.4.3. Kisumu County 100% RE Roadmap

Ms Sayuri Chetty from ICLEI Africa provided an overview of the roadmap document which will guide the journey to 100% RE for Kisumu County. This started with first acknowledging and breaking down the RE vision for the county. She stated that if we break this down, what this really means is that universal = all citizens have access to energy, reliable = steady and continuous supply of energy, fewer power cuts and black-outs/power interruptions, and sustainable development = County exercises responsible consumption patterns which will allow green economic growth and resources for future generations to come. The vision guides the entire process for how we would like to get there.

Figure 5 below illustrates the high-level RE potentials for the County from, of which solar has the highest potential and hence is regarded as the workhorse of the transition. While wind potential, and



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biogas from crops have fairly low potentials, there is enough variety in terms of RE technologies and options to power the transition.

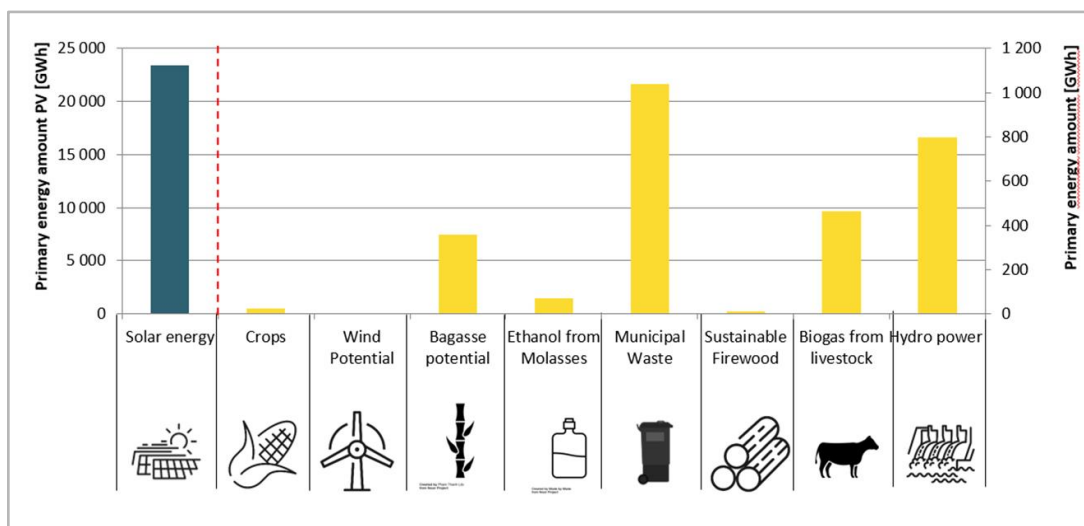


Figure 5. Summary of the RE potentials for Kisumu County

Overall, the modelling confirms that 100% RE is possible in seven different scenarios. The full modelling report, developed by Fraunhofer Institute, can be accessed here: <https://renewablesroadmap.iclei.org/resource/kisumu-county-energy-modelling-report/>.

Figure 6 below provides an overview of the different sections of the roadmap which covers three main action pillars, namely, energy efficiency and renewable energy, transport and clean cooking.

Outline of the roadmap			
Preliminaries	Part 1: Context	Part 2: Roadmap	Part 3: Implementation mechanisms
Abbreviations and Acronyms	Introduction	Principles	Action pillars (objectives, goals, indicators)
Governor's message	County Overview	Overall TimeLine	Pillar A: EE and RE
Vision statement	Actors and stakeholders	Roles and responsibilities	Pillar B: Transport
List of figures	Baseline status (energy systems, policies, SWOT)	Challenges and barriers in RE deployment	Pillar C: Clean cooking
List of tables	RE potential and GIS mapping		Pillar qualifying conditions
Executive Summary	Kisumu's 2050 scenarios		Policy recommendations
	100% RE pathways for Kisumu		Conclusion



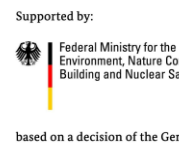


Figure 6. Outline and structure of the roadmap

Sayuri explained that the following principles were used in the development of the roadmap, which informs the content and likely the implementation of the roadmap.

- Improving the social and economic welfare of Kisumu County citizens
- Promoting the industrialization and economic growth supported by sustainable energy resources
- Environmental protection and climate action
- Co-development, inclusive participation and robust stakeholder engagement
- Process and whole-system approaches to energy thinking
- Science-based decision making for climate protection
- City leadership and bold decision making

Each strategic focal pillar has outlined objectives, SMART goals, targets, indicators and actions. Actions were based on the outcomes of the Visioning Workshop (February 2022), and were presented for discussion. These are summarised below.

### Energy Supply (RE and EE) Pillar

- Adopt Pay-as-you-go (PAYG) options for electricity generation (off-grid systems and embedded/captive generation for households, businesses and large facilities)
- Increase the uptake of efficient street lighting and solar street lights
- Develop a PPP strategy for Waste to Energy Projects
- Adopt solarisation of water pumping systems

### Transport

- Promoting one car-free days in a month
- Designate the car free areas in 5 streets
- Formation and implementation of policies and regulations
- Improvement of infrastructure to support NMT from 50 km to 200 km
- Increasing installation of LED/ energy saving to street light from 25 km to 100 km
- Expand greening and ecological infrastructure

### Clean cooking

- Promote the use of solar cookers
- Adopt LPG by sensitising potential users on it's benefits

Sayuri mentioned that we need to further validate actions and make sure the prioritises are still the same. The timelines for the roadmap development and the proposed implementation of the roadmap was further presented, along with some of the roles and responsibilities.



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Sharin added and concluded the roadmap session by stating that we acknowledge the adoption of the KCCAPP, and we find it useful to find alignment with the roadmap e.g. targets, wording, etc. along with the new County Energy Plan.

## 2.5. Q&A and Discussion

Dania opened the floor for questions and discussion. Some guiding questions were presented to start the discussion:

- Roadmap: Are the actions and targets still relevant? Do the timeframes make sense? Are the roles clear? How aligned is the roadmap to national and local priorities and targets?
- Policies: Barriers and enablers for country-led renewable energy implementation and generation.
- Financing and feasibility: barriers and enablers for county-led renewable energy implementation and generation.
- Key stakeholders: who is missing, and how can collaboration be improved (horizontally and vertically) between energy actors.

Mr Laban Okeyo contributed the following inputs:

- Concerned about the target for clean cooking in the roadmap which currently contradicts the national target. Universal access to clean cooking should be by 2028. This should be aligned as we are domesticating what the national policies are saying.
- 85.9% is grid electricity, so 100% RE will be achieved before 2050. Transport and cooking will require more effort, so we need to separate this to know what is achievable by when.
- It is important to note the different roles of national and county government. We can only include actions in the roadmap that is within the county mandate, otherwise we can just lobby. As an example, the policy PPP is outside of the county mandate, and everything bigger than 1MW.
- Request for the draft roadmap be shared with key stakeholders.

Mr Nickson Bukachi contributed the following inputs:

- County government can propose a project to be included into the national energy plan as we have seen in Nairobi. It is possible to have a PPP by involving the county government and another party.
- Regarding the cooking target – please add electric cookers and clean cooking in general. We have supported the development of LPG, but electric cooking might be more cost effective.
- For solar pumping, we can specifically look at community projects and irrigation for agriculture.
- Comment in chat: Actually, timelines for the county governments can be more ambitious than the national government provided there is a financing framework

Mr Ephren Ouma contributed the following inputs:



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- Timelines should align with the county plans such as the CIDP. The key plan in the public finance management act is the CIDP so our projects and programmes need to be included into the CIDP.
- Street lighting is switched off by the utility at times, hence we need to think of solutions.

## 2.6. Session 4: How do we get there?

Dania introduced the last session for today, which aimed to support participants working together to co-develop solutions for the transition. Participants were split into two groups. Table 2 provides a summary of the responses from the groups, based on the respective questions that were asked.

Table 2. Summary of group 1 and 2 responses from break-out session 2

Group 1	Group 2
<b>What are some policies that - if changed overnight - would make a big difference towards achieving the 100% RE at local level?</b>	
<ul style="list-style-type: none"> <li>• Financial regulations to favour RE generation. eg Kisumu has a CC policy and CC Act which states that County treasury is to allocate about 2% of county budget to fund CC projects in county</li> <li>• Kisumu has a draft Sustainable Energy Policy. This should be gazetted into an Act. If done, this will enhance transition to RE in Kisumu for eg.</li> <li>• The Energy Act should be fully domesticated by the County govt and the county. Setting up a RE fund as per the Energy Act, 2019</li> <li>• Faster process needed in the county</li> </ul>	<ul style="list-style-type: none"> <li>• Green building guidelines and policies - while the national government is trying to develop at national level SWH in buildings that use a lot of heating for water, there needs to have county level implementation support. County does have the mandate to approve buildings/plans.</li> <li>• RE mainstreamed into land use/spatial development plans for 10 years (GIS based)</li> <li>• Green building aspects to be integrated into the building code (currently being developed) to accelerate RE/EE</li> <li>• City municipal board/town management board (mandated to manage all issues in urban areas) to support the rollout of 100% RE</li> <li>• Policy to promote EE/RE uptake through its own assets</li> <li>• Create awareness and promote counter-action for waste separate/management, RE/EE - possibly through established</li> </ul>



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	energy centres/information centres in the county
<b>Can the local government itself (through its own assets) act as an example for RE/EE uptake?</b>	
<ul style="list-style-type: none"> <li>• Yes, the LG can actually lead/ do that (transition) to RE and EE. eg, Kisumu County has already done some work on energy audits and energy efficiency</li> <li>• Kisumu: Adoption of clean cooking and distributions. Building plans are approved by the County Govt. Hence, they can leverage on this mandate to drive the RE and EE transition in the building sector. Even the county's role in spatial planning can assist in this.</li> </ul>	<ul style="list-style-type: none"> <li>• Smart ways of energy management and controlling consumption and losses.</li> <li>• Budget alignment required</li> <li>• Promote EE in county own buildings. Super ESCO initiative at the national level which the county level can take up as well.</li> <li>• Electric vehicles/busses/BRT systems - requires funding though</li> </ul>
<b>What administrative hurdles are encountered when trying to implement projects?</b>	
<ul style="list-style-type: none"> <li>• Time consuming processes</li> <li>• Getting funding/financing for projects needs to be streamlined. Even when the law provides the resources, they are not there (the funds do not flow)</li> <li>• Administrative challenges: Energy departments are not independent (often merged with other departments like CC, trade etc) makes it lose its focus</li> <li>• Continuous / regular changes in county staff (every 5 years) for elected staff which changes the priorities of the county</li> </ul>	<ul style="list-style-type: none"> <li>• Financing for feasibility studies is difficult to access</li> <li>• Accessing land for projects, land tenure issues</li> <li>• Lobbying for budget and prioritising RE/EE. Needs to be aligned to the priorities of the county assembly</li> <li>• Getting high-level political support from county management, as well as community support and participation</li> <li>• Approvals of projects and environmental approvals, and inter-departmental streamlining for approval processes / coordination between departments</li> </ul>
<b>What are milestones that can be built in towards achieving 100% RE (in terms of the timeline for implementation)?</b>	
<ul style="list-style-type: none"> <li>• Aligning with the CIDP timelines</li> </ul>	<ul style="list-style-type: none"> <li>• Guideline for developing energy/information centres and</li> </ul>



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<ul style="list-style-type: none"> <li>• Take advantage of the fact that 77% of generation is from RE and 93% power consumption from RE.</li> <li>• Use existing grid to capitalise</li> </ul>	<p>communication strategy thereof - upscale work that is already being done.</p>
<p><b>What are the low hanging fruits? I.e. what steps / actions can be taken with minimum effort/resources etc towards achieving 100% RE?</b></p>	
<ul style="list-style-type: none"> <li>• Leveraging on the existence of development partners who are already present in the county. The county would need to develop enabling structures to tap into this</li> <li>• Awareness raising on benefits of using EE and RE actions especially at community level</li> <li>• SusWatch has a catalogue that counties can use to identify solutions</li> <li>• Take advantage of the pay as you go models that have been developed by the county</li> </ul>	

Volunteers from each group provided a brief summary of their groups discussions in plenary. Dania thanked the groups for the feedback and handed over to Sharin to close the session with some next steps.

## 2.7. Way forward and next steps

Sharin highlighted that we achieved a lot in the project which we can be proud of, especially considering the challenges offered by the pandemic. Figure 7 illustrates the key deliverables for the project where the larger writing indicates the main focal activities.



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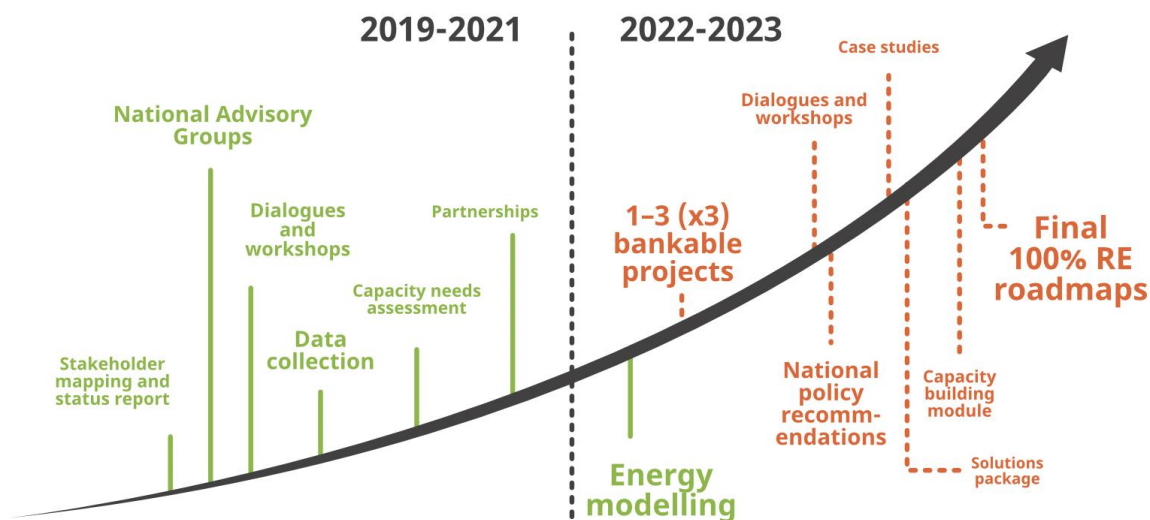


Figure 7. Main deliverables of the 100% RE project

Sharin noted that August will be a challenge to engage with the County due to elections and the team has noted this and taken it into consideration. In the coming months, the ICLEI Africa team will work on further developing the roadmap and validating the actions, progressing on the policy analysis and drafting policy recommendations which will support the upcoming policy workshop.

She further highlighted the Serious Games activity, which we hope to have a session in person to go through. Sharin acknowledged the diverse and active participation of stakeholders, and the commitments and hard work of national and local partners. She concluded by stating that the workshop report will be shared, and handed over to the County to provide some closing remarks.



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Ephren requested the team to support building capacity and extend support for the work of the Council of Governors where they are currently inducting the new leadership.

Mr Oganga concluded the session by mentioning that this was a fruitful meeting and appreciating the participation of the Ministry of Energy, Council of Governors, finance institutions, development partners, SusWatch and the three countries. In addition, Mr Oganga thanked ICLEI Africa and the team for organising this session. He ended by emphasising Kisumu County's commitment to RE.



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### 3. Annexures

#### Annexure 1: Agenda

**Date:** 13<sup>th</sup> July 2022

**Time:** 09:00 – 13:00 EAT

**Online:** via [Zoom](#)

Meeting ID: 889 7231 7980

Passcode: 955437

TIME	ACTIVITY	FACILITATOR	DESCRIPTION
08h45	Technical checks for speakers	ICLEI AS	Sound, video checks
09h00	Welcome and Opening	Eng. Nzioka, MoE	Round of introductions in chat
09h10	<b>Session1: Purpose of the MLG Dialogue</b> <ul style="list-style-type: none"> <li>Brief overview of the 100% RE Project and summary of project milestones</li> <li>What is 100% RE and how does it meet the climate action goals of Kisumu County and Kenya?</li> </ul>	ICLEI WS ICLEI AS	Ppt Presentation
09h20	<b>Session 2: Where are we? The National context</b>	Eng. Nzioka, MoE	Presentation with powerpoint slides (max 5 slides, 10 mins)





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TIME	ACTIVITY	FACILITATOR	DESCRIPTION
	<ul style="list-style-type: none"> <li>Overview of Kenya's energy landscape – Links to overall development vision, progress made, challenges &amp; opportunities</li> <li>Placing the 100% RE project in the current country context</li> </ul>		
09h30	<p><b>Session 2 cont: Where are we? Kisumu county context</b></p> <ul style="list-style-type: none"> <li>Overview of county context               <ul style="list-style-type: none"> <li>Energy overview (energy profile, who is doing what, what are needs)</li> <li>Targets and goals around energy</li> </ul> </li> <li>Challenges and opportunities for achieving goals.</li> </ul>	Mr. Oganga, Kisumu County	Presentation with powerpoint slides (max 5 slides, 15 mins)
09h45	<p><b>Session 2 cont: Where are we? The Financing landscape for RE in Kenya</b></p> <ul style="list-style-type: none"> <li>Overview of funding available</li> <li>Alignment between national policy and county mandates for RE</li> <li>Barriers to financing of RE</li> <li>Access to climate/RE finance at county level (i.e. what needs to be in place at county level for access to finance to be achievable)</li> </ul>	Dr. Somorin, AfDB	Presentation with powerpoint slides (15 mins)
10h00	<p><b>Session 2 cont: Where are we – Breakout rooms</b></p> <p>Where are the gaps and opportunities for financing RE at county level as highlighted by the national policy and finance landscape for RE – what are the relevant barriers and enablers for the policy, financing and actor landscapes respectively?</p>	ICLEI AS / WS to host breakaway groups	Breakout session and discussion



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TIME	ACTIVITY	FACILITATOR	DESCRIPTION
10h15	<b>Session 2 cont: Where are we - feedback</b>	Representatives from each breakaway group	Plenary - Presentation of outcomes from breakaway groups (5 mins each)
10h30	<b>Session 3: Where do we want to get to?</b> Creating vision through collaboration <ul style="list-style-type: none"> <li>○ Kisumu / Nakuru / Mombasa: What does '100% RE' SUCCESS look like to us at county level (presentation of Vision statement, including modelling scenarios)?               <ul style="list-style-type: none"> <li>○ Considering current barriers to energy access at county level, what needs to be overcome in order for 100% RE to be achieved at county level?</li> <li>○ Who are the critical partners we need to work with?</li> <li>○ How can national government, financiers and other stakeholders assist?</li> <li>○ What policy mechanisms are required?</li> </ul> </li> </ul>	ICLEI AS and County representatives (Kisumu, Nakuru, Mombasa)	Presentation with powerpoint slides (5 mins each)
10h45	<b>Session 3: Where do we want to get to? Roadmap to 100% RE</b> <ul style="list-style-type: none"> <li>○ Overview of draft Roadmap to 100% RE (outline)</li> <li>○ Policy gaps at local level and recommendations</li> <li>○ Implementation mechanisms (e.g. SEACAP), actions and proposed impacts</li> <li>○ Timeframes and roles</li> </ul>	ICLEI AS	Presentation with powerpoint slides (15 mins)
11h00	<i>Comfort Break</i>		
11h15	<b>Session 3 cont: Where do we want to get to? Q&amp;A / Discussion</b>	ICLEI AS ICLEI WS	Plenary



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TIME	ACTIVITY	FACILITATOR	DESCRIPTION
	<ul style="list-style-type: none"> <li>○ Feedback from participants on Roadmap (Are the actions and targets still relevant? Do the timeframes make sense? Are roles clear? How aligned is the roadmap to national priorities and targets?)</li> <li>○ The current renewable energy policies – barriers and enablers for county-led renewable energy implementation and generation</li> <li>○ Financing and feasibility – barriers and enablers for county-led renewable energy implementation and generation</li> <li>○ Key stakeholders – who is missing, and how can collaboration be improved (horizontally and vertically) between energy actors</li> <li>○ Discussion: e.g. National government can ‘respond’ / reflect on the counties’ visions and aspirations, which will likely include the Integrated National Energy Framework</li> </ul>		
11h45	<p><b>Session 4: How do we get there? Breakout rooms</b></p> <ul style="list-style-type: none"> <li>○ What are some policies that - if changed overnight - would make a big difference e.g. procurement policies, or fleets or energy use to the transition to RE at local level? E.g. How can stakeholders be incentivized to switch fuels for example?</li> <li>○ Can the local government itself through its own assets act as an example for RE/EE uptake?</li> <li>○ What administrative hurdles that are encountered when trying to implement projects?</li> </ul>	ICLEI AS / WS to host breakaway groups	World Café style via breakaway groups (45 mins)



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TIME	ACTIVITY	FACILITATOR	DESCRIPTION
	<ul style="list-style-type: none"> <li>What policies are missing entirely that can be used to implement the roadmap? Etc. Development of a timeline towards achieving goals and actions (link to roadmap) – what are small milestones that can be built in?</li> <li>Considering this timeline, what are the MAIN policy enablers and barriers for achieving the roadmap to 100% RE?</li> <li>What are the low hanging fruits?</li> </ul>		
12h30	<b>Session 4 cont. How do we get there? Feedback session</b>	Representatives from each breakaway group	Presentation of outcomes from breakaway groups (5 mins each)
12h45	Overview of the way forward <ul style="list-style-type: none"> <li>Next steps</li> <li>Serious Games</li> </ul>	ICLEI AS ICLEI WS	Powerpoint presentation
13h00	Closing remarks and goodbyes	Eng. Nzioka MoE	



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## Annex 2: Participants List

NAME	DESIGNATION	ORGANISATION
Dania Petrik	Professional Officer	ICLEI Africa
Dr Azizat 'Sola Gbadegesin	Professional Officer	ICLEI Africa
Carine Buma	Professional Officer	ICLEI Africa
Sharin Govender	Senior Professional Officer	ICLEI Africa
Sayuri Chetty	Senior Professional Officer	ICLEI Africa
Grace Stead	Senior Professional Officer	ICLEI Africa
Joseph Oganga	Chief Officer Energy and Industrialisation	County Government of Kisumu
Laban Okeyo	Acting Director: Renewable Energy	County Government of Kisumu
Evans Kipruto	Program Officer	Council of County Governors
Nickson Bukachi	Senior Renewable Energy Officer	Energy and Petroleum Regulatory Authority
Felix Akello	Energy Planning	County Government of Kisumu
William Okoyo	Head ESG & Sustainability Advisor	Victoria Commercial Bank
Dr Olufonso Somorin	Regional Principal Officer - Climate Change and Green Growth	African Development Bank
Kanak Gokarn	Junior Officer: Sustainable Energy	ICLEI World Secretariat
Engineer Stephen Nzioka	Senior Deputy Director Renewable Energy	Ministry of Energy
Grace Karanja	Environment, Energy & Natural Resources	County Government of Nakuru
Ephren Ouma	Director Petroleum and Electricity	County Government of Kisumu
Felix Akello	Energy Planning Officer	County Government of Kisumu



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NAME	DESIGNATION	ORGANISATION
William Okoyo	Head ESG & Sustainability Advisor	Victoria Commercial Bank Limited
Purity Kimotho	Alternative Energy Department	
Justus Munyoki	Environmental Management Expert	Sus Watch
Krti Munot	Project Manager	GIZ
Abdulsalam Omar	Climate change unit officer	Mombasa County