



Local Leadership in the Renewable Energy Transition and Green Hydrogen Economy

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ICLEI's Sustainable Energy position



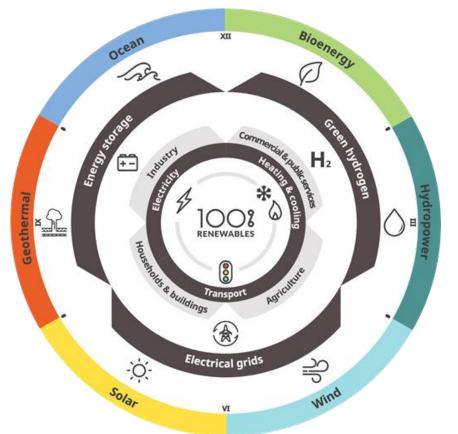
Building on the principles of sustainable development as defined by the United Nations, the definition of sustainable *energy* involves **meeting present energy needs without compromising the ability of future generations to meet theirs.**

We consider that such an energy system must rest on the foundation of energy sources whose use in the present does not compromise their availability in the future, i.e. renewable energy. It is important that these renewable energy (RE) sources are applied in context-specific, natureconscious and socially sensitive ways.



100% Renewables Cities and Regions

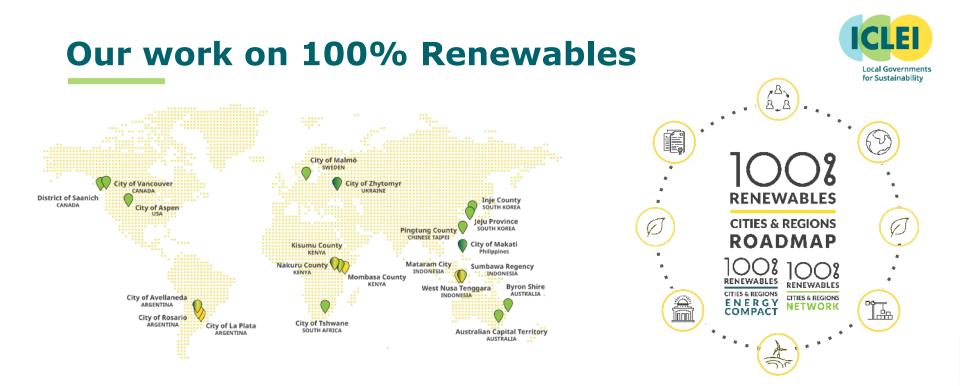




"Renewable energy encompasses all renewable resources, including bioenergy, geothermal, hydropower, ocean, solar and wind energy. One hundred percent renewable energy means that all sources of energy to meet all end-use energy needs in a certain location, region or country are derived from renewable 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

Graphical representation of 100% renewable energy by ICLEI - Local Governments for Sustainability



Developing roadmaps towards 100% renewable energy

Assistance with local policy development

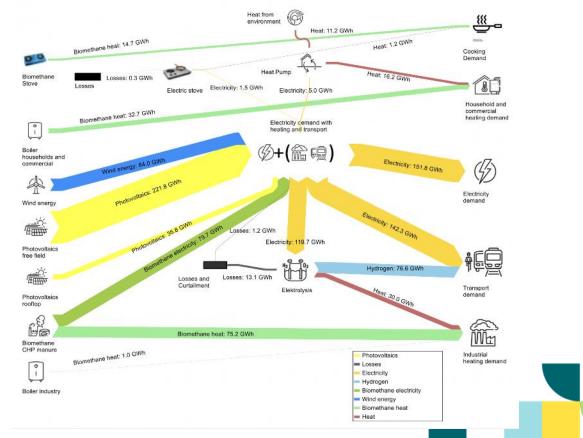
Enabling access to finance and developing bankable RE projects

Foster multilevel governance and strengthen capacities of key stakeholders

100% RE: Avellaneda, Argentina



Energy flow as outlined in the leading scenario for 100% renewable energy use by 2050:



100% RE: West Nusa Tenggara, Indonesia

Energy flow as outlined in the leading scenario for 100% renewable energy use by 2050:

Electricity: 1037.0 GWh * Wind energy: 3187,0 GWh 5 Photovoltaics Electricity demand with Hydro energy heating, transport, fuel Cooling Losses Wind energy Hydro energy: 66,0 GWh Electricity **⑨+(**窳唱) Electricity: 10335.0 GWh 励出 45 Hydrogen Biogas electricity 15901.0 GW - Methanol and Methane Hydro Wind energy Electricity Energy Biogas heat demand Heat Geothermal LOGWIN Electricity: 11599.0 GWh Photovoltaics Hydrogen: 2700.0 GW free field Elektrolysis Transport demand THIN Heat: 3398,0 GWh Hydrogen: 4681,0 GWh Losses and Photovoltaics Curtailment s. 7003.0 GWh rooftop F H-C-OH nol and Methane: 3620.0 GWh Synthesis incl. Biogas heat: 2544.0 GV Geothermal CO2 capture (Methanol and Methane) WE Biogas heat: 3382,0 GWh Geothermal: 366.0 GW Industrial and Heat: 431.0 GWh Electricity: 65,0 GWh Biogas CHP crops commercial Fuel and heating demand Heat Pump Biogas heat: 4615.0 GW **Biogas Stove** (Crops) *** Biogas heat: 472.0 GWh 22242 Cooking Biogas stove Demand (manure)



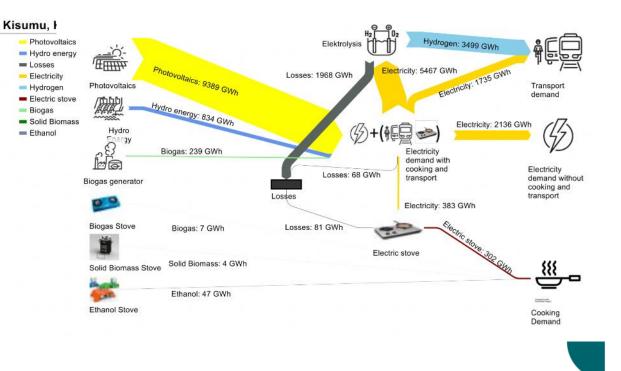
RENEWABLES

CITIES & REGIONS ROADMAP

100% RE: Kisumu County, Kenya



Energy flow as outlined in the leading scenario for 100% renewable energy use by 2050:



Developing bankable RE/EE projects



Local Governments for Sustainability

- Ground-mounted 3.6 MW solar PV farm for Avellaneda, Argentina
- 1. Solar rooftops for healthcare facilities in West Nusa Tenggara, Indonesia
- Energy audits, energy efficiency measures, clean cooking and solar rooftop for lighting and water pumping for 9 hospitals in Kisumu County, Kenya



Join the 100% Renewables Cities and Regions











The 100% Renewables Cities and Regions Network and Energy Compact aim to support the **renewable energy transition in cities, towns and regions around the globe**, expanding and extending the support offer from the 100% Renewables Cities and Regions Roadmap project beyond the initial cohort of cities.

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100% Renewables Cities and Regions Roadmap — Network — Energy Compact <u>https://renewablesroadmap.iclei.org/</u>

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