# 100% RE Building Blocks

A practical toolkit for
a sustainable transition to
100% Renewable Energy

# Activate local resource potential

## Mobilise local resources

Map stakeholders and their interests and identify existing engagement platforms and potential gaps for different stakeholders.

Organize workshops and roundtables to identify interests, roles, level of engagement, form coalitions, set up taskforces, engage different actors, start planning etc.

## Preliminary assessments

Identify the RE potential of your region.

Analyse energy consumption data and identify energy shares by source.

Measure current Energy Costs.

Define geographical boundaries of the 100%RE area in transition.

Identify GHG emissions by section.

Measure and quantify Externalities.

## Identify programs for support and assistance

Identify programs, funds and supporting schemes (from local to international from across departments (energy, environment, economic development, social welfare, etc.) that might support your 100%RE transition.

# Develop the 100% RE blueprint

## Define the 100% RE target

Define what sectors are included in the target.

Explain how you calculate your RE shares.

Define your mid-term target / by 20__

Define your long-term target / by 20__

Define the scope of the target (e.g. community-wide, municipal operations etc.).

Define the role of public institutions, private entities, citizens, utilities and energy companies.

## Model 100% renewable energy scenario

Identify potential partners in the region such as universities/research institutions to conduct the modelling.

Evaluate the infrastructural changes the scenario entails.

Explore opportunities to fund a 100% RE scenario.

Explore how the 100% RE scenario meet sustainability criteria.

## Estimate potential socio-economic benefits

Calculate potential savings such as import of conventional energy and additional local revenues.

Explore short-term, mid-term and long term economic savings.

Define externalised costs of current energy system.

# Formalize aims and functions

## Fix binding targets

Map existing policies for renewable energy.

Identify partnerships with other levels of government.

Identify legislative gaps and barriers.

Map overlapping and contradicting policies and legislations across sectors.

Define political mandate in energy policy of the particular juristiction.

## Define comprehensive legal and regulatory frameworks

Identify gaps in the existing legislative framework to define potential additional laws and regulations to be implemented.

Identify laws and regulations that should be ammended.

Map which stakeholders are addressed by the existing laws and policies.

## Establish relevant institutionalized bodies

Set up institutional bodies responsible for a 100%RE transition across levels of government (e.g. commissions, taskforces, supervisory bodies, institutions).

Identify exemplary bodies in other jurisdictions.

# Promote energy conservation and efficiency

## Change behaviour

Engage your community in local decision making processes related to energy consumption and production.

Define projects and platforms to foster community engagement and education particularily on energy.

Map existing policy initiatives that target change of behaviour with in a community or society.

## Retrofit existing built-environments

Identify percentage of your GHG emissions coming from buildings.

Define energy efficiency improvements to be implemented in buildings and its potential economic savings.

Define the kind of energy that is used in the built environment (e.g. embodied energy, operational energy, on-site generation, passive energy conservation etc.).

Identify winners and loosers of efficiency measures.

## Upgrade infrastructures and support efficient technologies

Identify inefficient infrastructures in your community.

Identify efficiency potential of sector integration and infrastructural changes.

Identify winners and loosers of measures.

# Increase and integrate RE across sectors

## Increase renewable electricity generation

List ways to support the creation of new RE generation capacity.

## Tackle the Built Environment Challenge

Support the creation of new RE generation capacity.

Improve energy efficiency (see overlaps with other building blocks).

Support Demand-Side Management and smart infrastructure developments.

Identify the role of different stakeholders in the current and future energy infrastructure.

Identify opportunities to integrate different sectors such as electrification of heating/cooling system to balance variabilities and enhance storage capacity.

Identify beneficials of a smart energy system and adapt finance mechanisms/ energy pricing.

## Tackle mobility and transport challenges

Evaluate and assess your community's public transport system.

Encourage active mobility (walking and sycling), public transport and mix-use developments.

Evaluate the community's public transport system and analyse citizen´s mobility behaviour incl. connection to surrounding regions/suburbs.

## Modernize the grid and other infrastructure

Assess the implications of larger RE penetration in terms of storage capacity, demand side management and overall infrastructural upgrade.

Improve and enlarge power network infrastructure, storage options and demand side management solutions to accommodate larger RE shares.

# Identify financial resources

## Introduce innovative and alternative financing mechanisms

Map existing financing mechanisms for building renewable energy infrastructure and implementing energy efficiency measures.

Identify finance gaps to achieve 100% RE target.

Map role of stakeholders (incl. citizens) in existing finance mechanisms and identify potential innovation.

Explore finance mechnisms implemented by other pioneering institutions with similar conditions.

Map political mandate of juristiction to develop new finance mechanisms.

Develop or identify decentralized fiscal policies.

Implement new mechanisms to internalize externalities

Introduce innovative and alternative financing mechanisms.

Establish stable, long-term support scheme.

Define long-term and stable support systems that encourage investments in RE and categorize them by "Energy Production", "Energy Efficiency" and "Consumption Reduction".

# Support decentralization and inclusion

## Ensure accountability and transparency

Evaluate how transparent the systems in place are and how this affects citizen's participation.

Develop mechanisms to ensure accountability and transparency.

## Promote inclusive communication and outreach

Develop inclusive citizen consultation processes.

Define a communication strategy and identify channels to reach a diverse range of actors.

Assess beneficiaries and loosers of the transition to 100% RE and align the communication message based on this analysis.

## Empower a decentralized and diversified energy transition

Explore opportunities for new actors such as citizens to become active stakeholder (investor, owner, member etc.) in the energy system.

Support community-based cooperative models as part of the energy market.

Assess socio-economic benefits of a decentralised, diversified energy system (see overlaps with other building blocks).

Map existing models for decentralised investment or decision making in other sectors and explore transferrability to energy sector.

## Safeguard a socially just transition

Assess number and the kind of jobs in the conventional energy sector (direct and indirect) and define steps to facilitate a smooth transformation of traditional work forces.

Engage universities, vocational schools, education centers to assess potential of training measures for workers from the conventional energy system.

# Nurture vertical and horizontal cooperation and integration

## Further vertical cooperation

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| Map existing partnerships with other governments and institutions on local, national, regional and international level. | Assess benefits of existing partnerships and potential gaps. | Establish formal structures (if not yet existent) to facilitate vertical cooperation. | Map needs for cooperation with other governments on national, regional and international level to achieve the envisioned goal. |

## Cultivate horizontal cooperation

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|---|---|---|---|---|
| Map existing partnerships with neighbouring juristictions as well as with stakeholders within the juristiction. | Assess benefits of existing partnerships and potential gaps. | Establish formal structures (if not yet existent) to facilitate horizontal cooperation. | Map needs for cooperation with neighbouring juristictions as well as with stakeholders within the juristiction to achieve the envisioned goal by defining different roles and functions. | Map political mandate of different public institutions within the juristiction and assess potential overlaps and gaps. |

# Promote knowledge generation and capacity building

## Generate and disseminate specific knowledge

Establish projects frameworks that advance research and capacity building.

Develop activities and programs to facilitate knowledge sharing.

Map relevant stakeholders.

## Make knowledge and data accessible

List tools where data and knowledge can be easily shared and accessed.

Develop a space where different actors can contribute into the common pool of knowledge.

Map role of stakeholders in existing tools.

Assess which data is needed by whom, who owns it and for whom it is accessible.

## Promote capacity building and training

Develop and reinforce local capacities and expertise for necessary steps towards 100% RE.

Develop capacity building projects to support and train staff.

Define relevant capacities among different stakeholders.

Assess existing capacities and expertise in the juristiction.

# Engage in networks

## Form and engage in local and regional networks

Define potential networks with other local and regional jurisdictions.

Define potential networks with local civil society groups.

Define potential networks with the private sector.

Map needs for engaging in local and regional networks.

Map existing networks, the role of their members and potential gaps.

Define suitable focal point within the juristiction for the network.

## Participate in international networks

Map needs for engaging in international networks.

Map existing networks, the role of their members and potential gaps.

Define suitable focal point within the juristiction for the network.