



Coalition Roadmap 2021

Energy Efficiency and Accessibility in Africa

ENGIE, CAN Tanzania, GERES, ICLEI Africa, REFACC, Schneider Electric, World Future Council

This 2021/2022 roadmap aims to stimulate a dynamic logic on the way to the next Climate Chance - Africa Summit where the new targets can be presented as well as concrete examples (in annex) that can influence the revision of the Nationally Determined Contributions (NDCs) scheduled for COP26 in November.

I – WHERE ARE WE NOW?

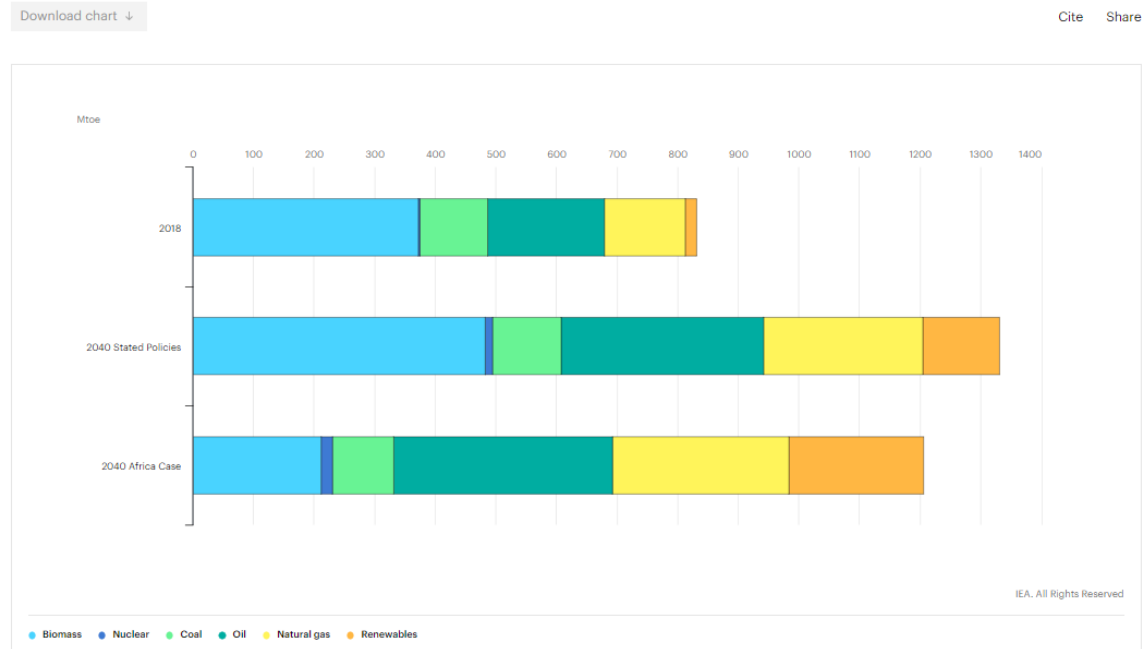
2020 was a very peculiar year because of the Covid-19 pandemic and the impacts it had on the Access to electricity in Africa. According to the [Climate Chance Observatory's](#) Sector-based Synthesis Report, the share of the world's population with access to electricity has gone from **83% in 2010 to 90% in 2018**. During the same period, access to electricity in rural areas increased from about **71% to 82%** and access to electricity in urban areas from about **96% to 97%**. Taking into account population growth, over this same period more than a billion people gained access to electricity. In 2018, 789 million people still had no access to electricity, including 550 in Sub-Saharan Africa, and 1 in 4 hospitals had no electricity (IRENA, 2020). This progress is now threatened by the Covid-19 pandemic. The IEA estimates that the number of people without access to electricity in Sub-Saharan Africa will grow by 12 million in 2020. Rising poverty in 2020 is also expected to make electricity unaffordable for more than 100 million people, increasing energy poverty (IEA, 2020).

For Africa, the Paris Agreement is of particular importance because, as on one hand, Africa is the most affected continent by climate change (7 out of 10 of the most threatened countries according to a report by the African Development Bank are in Africa), and on the other hand it has enormous potential in renewable energy production. Indeed, even if the continent emits only 4% of the world's greenhouse gases, Africa can contribute to achieving the long-term Sustainable Development Goals, notably in terms of mitigation through its renewable energy potential.

a) Overview of Africa's Energy Mix¹

Total primary energy demand in Africa by scenario, 2018-2040

Last updated 22 Nov 2019



For the time being, the African continent's energy needs are essentially dependent on a mix of biomass and fossil fuels. Biomass energy accounts for about half of Africa's total primary energy.

b) Diagnostic

Africa does not have the means to develop large electricity grids, especially since national policies have created too many administrative and technical barriers to the adoption of new technologies. It is therefore essential to think about the most cost-effective way to access them, such as mini grids and solar kits. We can therefore see that solar energy has become an important part of daily life, especially thanks to the use of lamps, which for the moment make it possible to manage a reliable and environmentally friendly source of lighting. On the other hand, cooking in the home accounts for 80% of the energy consumption, which remains a central issue on the continent and is not very well considered in the discussions on the energy issue.

c) Acquirement of new technologies by local actors

It is important to decentralize and liberalize the energy sector in a way that increases capability of local authorities to meet the energy demand created by urban and rural populations, as well as to create incentives for private entities' and youth' engagement.

d) Financing

The acute need for energy access encourages companies to provide solutions and donors to announce the willingness to facilitate this access. Indeed, *"Sub-Saharan African countries attracted 65% of the world's off-grid renewable energy investments over 2007-2019, with*

¹ IEA, Total primary energy demand in Africa by scenario, 2018-2040, IEA, Paris <https://www.iea.org/data-and-statistics/charts/total-primary-energy-demand-in-africa-by-scenario-2018-2040>



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investments concentrated especially in East Africa. Most of this went to offgrid renewables for residential use².

II – WHERE DO WE WANT TO GO?

Since the first energy coalition workshop at the Climate Chance Summit in Abidjan in 2018, participants have shared their ambitious vision for the energy sector in Africa. This part allows to identify potential actions for the coalition, it is mainly about activating synergies.

THE ROLE OF PUBLIC POLICIES

There is a general reluctance of the governments to provide greater access to energy, while the private sector and NGOs are actively working with local populations. For example, AKON Lighting for Africa, an NGO created in 2014, has launched an electrification project based on solar technology, which aims to provide access to energy for several million households in 40 African countries by 2020.

On the other hand, ENGIE continues to promote decentralised energy and prioritise the supply and use of off-grid renewable energy in Africa, using solar home installations and mini-grids. These activities are in line with ENGIE's objectives to give more than one million people in Africa access to low-carbon and decentralised energy by 2020.

In fact, moving from planning to concrete projects is a multifaceted challenge in Africa. The guidelines are often well done, but the transition to the implementation of these projects seems to be much more difficult, even if they are well funded.

It is therefore essential to structure the State's relationship with local elected officials and to better take charge of climate and energy issues. The purpose of local action planning will be to raise awareness and provide information to municipalities on energy supplies, which remain highly centralized at the state level for the time being. On the other hand, a legal framework should enable the encouragement of innovative solutions at national level and develop an awareness of the importance of innovations by local authorities. By doing so, it would promote an exchange of best practices and examples between local authorities and thus contribute to collaborative management.

Strategic reflection on climate must therefore redefine the place and role of territories as a pivotal factor, as a place of collective awareness, mobilization and creative action. However, various constraints hinder the process of decentralization and accountability of sub-national levels. Achieving this challenge requires bolder decentralization policies and more local and forward-looking development processes.

THE ROLE OF WOMEN IN ACCESS TO ENERGY

Access to renewable energy and gender equality are essential for sustainable development and for adaptation to climate change, as stipulated in Agenda 2030. In order to build sustainable environmental pathways (climate change adaptation, secure access to green and sustainable energy) and address gender inequalities, we must work to address women's engagement, education and empowerment. Gender, environment and climate change are cross-cutting issues and although we are observing some positive changes on the continent, a number of challenges persist, especially in relation to Africa's climate and energy policies.

² IRENA, Global Landscape of Renewable Energy Finance 2020



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More efforts must therefore be channelled into developing and implementing gender-sensitive climate policies and programmes that address energy issues. Indeed, if the gender, environment and climate issues are addressed simultaneously, and if political, research and knowledge-sharing coordination is strengthened, it will be possible to make progress on the sustainable development agenda, in the fight against climate change but also to reduce inequalities.

By investing in women's access to renewable energy and climate technologies, we are promoting greater women's empowerment and independence. We are also accelerating their economic development, making their social and environmental impact more substantial.

Several ways to include gender in access to renewable energy:

- Women must be involved in decision-making and can play a leading role in promoting and decentralizing access to renewable energy;
- Apply an intersectoral approach in gender, climate and energy policies;
- Promote the efficient use of renewable energy by women, and reduce their time spent on unpaid domestic work;
- Target political activities in order to include gender issues into the climate and energy agendas
- Remove investment barriers and create equal opportunities for employment and access to new technologies;
- Shaping the budget planning process so as to finance the implementation of gender and climate sensitive solutions.

AWARENESS RAISING / EDUCATION

With regard to environmental education of the population, it would be necessary to create a youth environmental training module that would include the issue of adaptation to climate change and the importance of developing access to renewable energy, particularly as a tool to combat social inequalities (guaranteed access for all and at a reduced cost). However, for education to have transformative power, it must be based on:

1/ active, inclusive and participatory teaching and learning processes ;

2/ qualified and inspiring teachers ;

3/ ties with communities and local concerns.

We can note for example that Geres (co-pilot of this coalition) has developed a training module entitled "UNDERSTANDING AND ANALYZING ENERGY NEEDS A LOCAL LEVEL", aimed at students and decision-makers alike, allowing :

- to raise awareness of the challenges of the energy transition and access to energy
- train students to study the energy constraints of a local area
- ensure a social approach to access to energy

There is also a need to develop adult awareness campaigns, such as the implementation of UNESCO's Global Programme of Action (GAP) on Education for Sustainable Development (ESD). Detailed roadmap and the four strategic implementation points available here:

<https://en.unesco.org/gap/implementation>

DEVELOP AN EFFICIENT ENERGY AND WASTE MANAGEMENT SYSTEM

Waste, which can be used and recycled, is intrinsically linked to energy issues. Some cities facing rapid urbanization produce a significant amount of waste. This poorly managed waste is a major



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source of pollution for both people and the environment. But if well managed, they would offer many opportunities and benefits, especially in terms of energy, such as, for example biogas production.

On the other hand, renewable energy provides an important alternative for African populations, who are struggling to improve their quality of life. It provides important solutions, especially with regard to cooking by using innovative biomass instead of traditional biomass. These innovative cooking ovens reduce energy demand because their efficiency in converting biomass into heat is two to three times higher than traditional ones'. It is estimated that innovative biomass-based equipment will become the main cooking device across the continent by 2030.

RURAL COMMUNITIES' ACCESS TO RENEWABLE ENERGY

Recognizing that many African people still live in the area, the continent has great potential to benefit from an inclusive approach to energy development. The use of mini renewable energy systems offers enormous socio-economic benefits for rural populations. They can plan and meet their energy needs because these modern renewable energy technologies can be broadly deployed. This technology itself is already a great asset for local regions and villages because they have no need to connect to a centralized electricity grid of mass distribution. Access to renewable energy provides many advantages in terms of health, education, agriculture, access to water and the telecommunications sector.

IMPACTS OF ENERGY PROJECTS ON BIODIVERSITY

This year, Climate Chance is striving to create more links between the Climate and Biodiversity Agendas. This involves thinking about what energies can be "clean" and identifying the potential impacts of these energies on the environment and biodiversity in the broadest sense. These impacts can vary according to the IUCN, "*clean energy sources*" like solar and wind can also *impact biodiversity through disturbance and loss of habitat, the generation of noise pollution, collision and other indirect pressures*". For this reason, technological solutions for accessing clean energy sources, must consider the potential impacts of infrastructure, when the project is being set up as more, as IUCN explains "*renewable energy developments need to address the associated risks to biodiversity, throughout the entire project life-cycle -- from design and permitting to the operational and decommissioning phases.*".

III – HOW TO GET THERE?

It is necessary to be realistic about the capacity of actors to mobilise in collective dynamics, without a dedicated facilitator 100% of his time. The Climate Chance Association cannot provide a full-time human resource and relies on the **actors involved in the coalition**. As such, it is proposed to target only **two or three actions** to be included in the 2021-2022 Roadmap in order to be realistic and to be able to measure progress.

- **Action 1: Creating a network of actors**

We propose that coalition members continuously map interesting actors, best practices, high impact, scalable and replicable projects in the Adaptation and Cater sector. Climate Chance could promote these initiatives through its [Cartography for Action](#), the [Climate Library](#), publications in the [Observatory's Synthesis Reports](#) or social media posts on Climate Chance's



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pages. These projects will also be promoted through our Portal of Action, and more broadly, they will be able to inspire the community of non-state actors that are part of the coalition. To share a project, [simply fill in this form](#).

- **Action 2: Disseminating information**

Information related to Energy in Africa

Since 2018, a mailing list energies.af@climate-chance.org has been set up to promote exchanges between coalition actors. This mailing list allows members to share all relevant information on the sector: funding opportunities, calls for projects, training opportunities, interesting events, etc. Today, it counts more than 500 members and is mainly run by the Climate Chance team.

Coalition members are strongly encouraged to share any information that could be useful to other members.

Information related to funding opportunities for Energy projects

As mentioned in previous Workshops, coalition members feel the need to improve **their access to funding-related information**. Indeed, in order to try to respond to this major issue, Climate Chance is preparing in 2021, a preparatory study on a Accessible Climate Finance Portal for non-state actors. This Portal will be designed to continuously disseminate current financing opportunities for non-state actors in the African region. To make this Portal as efficient and useful as possible, Climate Chance is open to any suggestions from coalition members on the desired criteria of this Portal (types of funds, duration etc) and would also like to know more about the obstacles often encountered by non-state actors in their search for funding.



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3 projects led by non-state actors in Africa:

- 1) Promoting access to energy: technical and methodological support from Geres to the Saint-Louis Region Renewable Energy Access Programme; presented by Alexis Caujolle (Geres) and Victor Romero Amigo (The Partnership)



<https://www.geres.eu/en/>

Since 2017, Geres has been providing technical and methodological support to the "PAER", Programme on Renewable Energy Access in the Saint-Louis Region, led by the NGO Le Partenariat and the Regional Development Agency of St Louis (ARD).

The objectives:

In this context of reliable, sustainable, and sufficient energy needs, the Programme on Renewable Energy Access (2017-2020) aims to disseminate renewable energy throughout the Saint-Louis region, by carrying out demonstration projects for households, economic operators and farmers' organisations.

For the first phase (2017-2020), which is coming to an end, the renewable energy access programme aimed to

- Establish favourable institutional conditions for the effective promotion of renewable energy
- Strengthen the emergence of local social and solidarity-based enterprises that are efficient and competitive, offering adapted biogas and solar solutions.
- Promote the dissemination of renewable energies to economic operators and households in isolated areas.

The results:

- More than 6,000 inhabitants, far from the main towns of the region, will have access to new services provided by these artisans and already the local authorities want to move the weekly market close to this platform.

Scaling up:

- The external evaluation carried out at the end of the project finally shows that: "the Renewable Energy Access Programme has created a territorial dynamic on energy issues in the Saint-Louis Region" and the prospect of a replication of the PAER in the Matam Region is opening in the framework of a second phase of the programme currently being negotiated.



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- 2) Access to energy for Women's empowerment and resilience, presented by Maïmouna Diouf (Enda, Energie)



enda énergie

The objective of this project:

The "Strengthening the resilience of women producers' groups in seven localities of the Senegal River Delta" aims to:

- Contribute to the empowerment of women.
- Increase the agricultural productivity of women producers in the delta through sustainable land management, capacity building, access to energy services and climate information.
- To develop adaptation and mitigation strategies for agricultural risks related to the effects of climate change.

The results of this project:

- 1) Access to land: Provision of 0.9 ha for women's groups in Potou, 0.8 ha for women in Gandiole, 1.5 ha for women in Diama, 1.5 ha for women in Ndiagambal and 9 ha fenced in Gandiaye
- 2) Access to energy: Development of production sites in Diama, Gandiole, Potou and Diagambal (clearing of brushwood, tillage) and installation of drip systems and solar pumping. 40% reduction in expenses;
- 3) Capacity building: Capacity building of 70 women (Diama, Potou and Gandiole) in the field of climate change, agricultural risks and climate information. Women producers trained in rural entrepreneurship women trained in leadership women in accounting and financial management.
- 4) Access to climate information: 50 women are chosen as "climate relays", prevention on rain, weather, air quality, etc.



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3) Public lighting: for safety and economic development in Uganda. Presented by Stéphane Redon (So'Sen)



So SEN

This project has been running for about 6 months and is about 1 third of the way through. Other phases are starting. So'Sen chose to implement this project in Uganda because, like many East African countries, there is a real deficit in lighting infrastructure with a rate of about 8% of population coverage in Kampala and 1% in secondary towns.

The **objective** of this project is to ensure rapid and sustainable development (100 African cities by 2030).

Three phases in the methodology of this project:

- 1) The audit phase with the reflection of a lighting plan.
- 2) The implementation phase in pilot cities (3 cities)
- 3) The observation phase to check that the service is working and to check that the community can take ownership of the project

The work is based on the gathering of three key actors:

- The population, which intervenes from the beginning of the project to express the needs and the priority sites to be lit, and to take responsibility for monitoring the equipment.
- The local authorities, who set up steering and monitoring committees for the equipment
- Operators who guarantee the quality and durability of the networks

This project aims to become a programme with the objective of "scale-up".