



MALABO
MONTPELLIER
PANEL

ENERGIZED

Policy innovations to power the
transformation of Africa's agriculture
and food system

SUMMARY



Energy is a key input in the food system and the basis for rural development. Clean energy is critical for people's health, the climate, and the environment. In Africa, a combination of high population growth, urbanization, and a rise in middle-class consumers is fueling a sharp increase in food demand. Access to reliable, affordable, sustainable, and modern sources of energy to prepare land, plant, harvest, process, distribute, store, and cook food will ensure that Africa's food system can respond to this demand within the context of increasingly scarce natural resources.

Africa's energy landscape is evolving rapidly. Dedicated programs to improve access to energy over the last decade have greatly improved electricity access for millions of Africans, with a transformative impact on the livelihoods of the rural poor. However, the overall average electrification rate in Africa south of the Sahara (SSA) remains low, undermining the development of rural economies and hampering progress towards meeting the targets set by the African Union Agenda 2063 and the Sustainable Development Goals.

Partly because of this, Africa is the region with the least mechanized food system in the world. 80 percent of the energy used to prepare land for agriculture in SSA is human manual power¹. At the same time, the agriculture sector is the region's largest employer, engaging almost half of Africa's workforce.

Africa now has the opportunity to leapfrog and develop smart energy systems by leveraging the potential of renewable energies and new off-grid and mini-grid solutions. While the focus in previous decades has been to extend central grids, innovation and the falling cost of renewable technologies has provided access to solutions that are more flexible, cost effective and affordable. Off-grid and mini-grid technologies for renewable energy sources such as hydro, wind, and solar power are already disrupting African energy landscapes.

At the same time, a proliferation of innovative business and payment models are bringing improved energy services to smallholder farmers in rural parts of Africa.

Building on Africa's leadership in mobile money and digital technologies, solutions are integrating services such as remote monitoring, Uber-like scheduling, and pay-as-you-go models including rent-to-own, leasing, and service for fee, into energy service provision for rural communities and farmers.

It is thus promising to see that several African countries have taken bold steps to better connect rural areas and food-system actors to energy sources. This report – **Energized: Policy innovations to power the transformation of Africa's agriculture and food system** – provides an overall picture of the state of play for energy in African agriculture, presents a framework for policy innovation and design, and focuses on what six African countries – Ethiopia, Ghana, Morocco, Senegal, South Africa and Zambia – have done successfully in terms of institutional and policy innovation for energy expansion in support of agriculture and rural communities.

By focusing on successful government actions in the above countries, the report seeks to demonstrate that progress is possible and to highlight what policy makers in other countries can do to move the needle. Important lessons can be learnt from these African countries when it comes to connecting rural areas to energy – be it on or off-grid – to the benefit of agriculture value chain actors. By adapting these lessons to countries' specific contexts and by bringing them to scale, African governments will accelerate their progress towards achieving their continental and global commitments.

Based on the analysis of government actions in the six case study countries, the Panel recommendations listed below call for integrated approaches for energy strategies and policies for agriculture that also address the synergies with health, the environment and community development, such as the challenges of continued high biomass-based energy use. Furthermore, investments in technologies and in systems innovation to scale off-grid and mini-grid solutions are crucial, as are cross-border policies to ensure energy security.

1- IRENA, 2015. Renewable Energy in the Water, Energy and Food Nexus. IRENA, Abu Dhabi, United Arab Emirates.

RECOMMENDATIONS

1. Design integrated strategies for energy by ministries and departments that have responsibilities for energy and those responsible for food, agriculture and rural development to address concurrent challenges.
2. Scale investments in off-grid and mini-grid solutions especially via start-ups and businesses to leapfrog outdated and dirty technologies.
3. Adopt gender-responsive energy strategies for the design and implementation of energy strategies as well as the choice of technologies and tools applied.
4. Address the multiple challenges of biomass-based energy use to ensure that biomass is produced more sustainably, and that indoor cooking is redesigned to be more environmentally friendly and not harmful to human health.
5. Develop cross-border policies for energy security to help reduce countries' reliance on imported fuels while diversifying the energy mix.

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