

FOREWORD



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“The development of renewables-based off-grid electrification solutions would appear to be the only viable solution in the near to medium term if electricity is to gradually stop being an often unaffordable luxury for African consumers.”

“We will make electricity so cheap that only the rich will burn candles.”

Although Thomas Edison’s famous 1887 boast turned out to be prophetic for the western world, there is no avoiding the fact that it still does not apply to developing countries, most notably in sub-Saharan Africa. Here, access to electricity is a luxury, with an overall penetration rate of 32%, falling to just 17% in rural areas, and electricity prices are often very high. In the face of the twin barriers of cost and availability, most households still rely on energy solutions such as firewood, candles, kerosene lanterns and battery lanterns that are time-consuming in terms of gathering fuel, unreliable, and destructive for the environment and users’ health.

Ambitious projects to extend national utility grids all the way out to rural areas will have zero impact on this reality for the foreseeable future. Furthermore, a feature of these projects is an energy mix that relies heavily on fossil fuels, which rules them out as a solution for Africa’s energy future. On the contrary, the development of renewables-based off-grid electrification solutions would

appear to be the only viable solution in the near to medium term if electricity is to gradually stop being an often unaffordable luxury for African consumers.

Recent technological advances that give us access to solutions for the production of electricity from renewable sources at ever lower prices and using

equipment that is relatively quick and simple to install, without the need for any megaprojects, represent a historic opportunity. This is the process the African Biofuel and Renewable Energy Company (ABREC) has been working on since 2009.

Africa has rich renewable energy resources and it is high time they were put to use. The goal must be to massively increase renewables’ share of the energy mix and the capacity and reliability of utility grids, and to reduce the energy gap, primarily through rural electrification, in regions where utility grids will never reach.

The sheer number of private and public actors engaged in setting up off-grid renewable solutions for access to electricity makes it hard to get a clear idea of how the sector is developing and the trends affecting it, both in sub-Saharan Africa and everywhere else where access to electricity remains a challenge.

This issue of FACTS Reports takes us on a journey from Laos to Rwanda, India to Madagascar and Uganda to Brazil, looking at real-life applications and offering us a geographical and technological overview of the solutions that are beginning to spread across areas of the developing world that still lack electricity.

This issue lays the groundwork for identifying best practices: choice of technologies, organizational structure, funding method, and so on. This is a process that depends on increasing assessments of field experiences and understanding and comparing the various barriers and opportunities that characterize every situation. Identifying best practices is a necessary precondition to the transition to renewable energy sources that the whole world is demanding, for our energy future depends on such a transition — nowhere more so than in Africa.