LE TEMPS

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In Africa, microfinance at the service of solar energy

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Solar energy's contribution to a country's overall energy output has long been marginal. That could soon change, notably through "macro" scale public-private partnerships and microfinancing schemes and technology adapted to the micro level.

In late May 2016, the International Finance Corporation (IFC), the private sector arm of the World Bank, rejoiced in the success of its partnership with the Zambian government in the field of solar energy. The IFC had indeed managed in record time to draw all the leading renewable energy developers to tender for two 50-megawatt solar energy production projects in the country. Although the volume of these projects represents only 5% of the energy produced by Zambia, the fact that the two winners offered their services at historically low prices for developing countries signals a new paradigm: solar is more than ever the future of energy supply in Africa.

Solar energy development is not only good news for governments that have this clean resource. At the level of the majority of the population, which is both poor and rural, photovoltaic panels are gradually replacing the expensive and harmful monopoly of coal and kerosene by providing an efficient and quiet technology for lighting and cooking. The positive effects on education and health are considerable.

Why has this taken so long, since photovoltaic panels have existed for 30 years? On the one hand, the cost of producing the panels themselves has been falling for the last decade and the reliability of the products and the associated batteries has seen sharp increases of late. On the other hand, the technologies to connect these panels to distributors and mobile payment systems in real-time have only recently emerged, with distributors finally establishing local marketing and maintenance relay networks.

Indeed, solar energy's development in Africa has been reminiscent of that of mobile telephony. Before wireless telephony became popular, most developing countries still had limited access to fixed-line phones. But this problem became obsolete with the proliferation of affordable mobile phones, allowing them to replace fixed-line networks in a few years. The same type of revolution is happening today with access to electricity for the many populations that are not connected to the grid.

Thus in East Africa, millions of people have already acquired small solar energy systems, providing them with access to electricity for the first time and allowing them to charge mobile phones and power a few lamps, radios, etc. Other developers are stepping up to deliver more powerful systems, aiming to virtually replicate the network capacity for SMEs in rural areas.

Developments in terms of financing are an essential element of the proliferation of these individual solar energy systems. While large renewable energy developers and governments benefit from aid from international donors, those promoting micro projects are turning towards investors or managers of private funds – so-called impact investors. For the end customers, financing has been revolutionized by an approach similar to that of financial inclusion. For decades, microfinance institutions have in fact provided microcredit and other financial services adapted to low-income populations with very limited capital. New off-grid solar system developers are mimicking the concept by providing a solution in the form of leasing. Mobile payment systems, such as M-PESA in East Africa, have also contributed to making the leasing solution possible, allowing users to make frequent small payments easily through their mobile phones.

Although the off-grid solar energy revolution is still in its infancy, its potential and its capabilities already foreshadow the fact that it will become the dominant source of electricity in the developing world.