

Lighting up Africa

Michael Elliott

How electricity will transform the continent

One afternoon not long ago, I was travelling in rural Ghana with a man who had never been there before. He was delighted by the bustle and business at the side of the road, all the signs of a nation on the move. "Just wait," I thought. Sure enough, as the sun went down at tropical speed, soon all that was visible from the bus were a few dim lights punctuating a heavy darkness. My friend fell silent.

For some 1.2 billion people, including nearly 600m in sub-Saharan Africa, life as it is known in the rich world stops after dark. Vietnam consumes as much power as all of sub-Saharan Africa outside South Africa. The lack of access to reliable supplies of electricity means that children cannot do homework, food spoils, women give birth by candlelight and cooking is done on basic stoves using wood or dung as a fuel—fuel that families can spend hours collecting from forests or fields, and which, burned indoors, is a source of pollu-

2014 IN BRIEF

South Africa holds a general election, with Jacob Zuma likely to remain president



Bright spark

tion that kills millions.

But it is not just at the household level that electricity matters. Without reliable power, businesses and economies cannot develop; factories cannot meet orders; vital connections to markets cannot be maintained. More than half of African business leaders identify a lack of power as a large constraint on growth. No surprise that when it comes to pressing development needs, many of Africa's most dynamic leaders say that power is more important than anything else.

Soon more will have it. In 2014 tackling energy poverty will be high on the international agenda. The UN's "decade of sustainable energy for all" will kick off, and countries will draw up plans to provide their citizens

with energy access by 2030. The Obama administration will extend its trumpeted development policy, the Power Africa Initiative, unveiled in Tanzania in 2013, which is designed to secure enough government and private investment to provide energy to 20m households and businesses. In parallel, America's Congress will aim to pass an Electrify Africa Act, which may turn out to be even more ambitious. And from all parts of the world, investors will seek opportunities to bring power to the poorest, and a burst of technological wizardry will flood the market with clever gadgets and clever ways to generate and distribute power.

Power is more important than anything else

All those efforts will be required. Measuring the world's unmet need for power is not easy, given different requirements in urban and rural areas, and between households and businesses. But in one broadly accepted assessment, the International Energy Agency (IEA) estimates that an additional investment of \$600 billion would be needed by 2030 to provide all those who lack power with enough for an electric light, a fan and a mobile-phone charger. By comparison, the Power Africa Initiative pledges only \$7 billion in public money for projects in six African countries, precipitating \$9 billion in private finance. There is a long way to go.

But if the task is enormous, so is the opportunity—and not just in providing life-enhancing services for so many. If Africa is to be electrified, it should be done in the right way. That means a cleaner way than the old industrial world managed.

Keep it clean

I grew up in a British city in the 1950s, when pea-soup smog was a standard winter experience, and where the natural colour of elegant classical-revival buildings seemed to be soot-black. Today, nearly 50 years after clean-air legislation was first passed, they glow in their original delicate shades of pink.

There is a lesson there. With current technology, bringing power to those who do not have it will inevitably lead to a small increase in global carbon emissions—at the IEA's basic level of access, about 0.7% more, the rough equivalent of five of China's largest coal-fired power plants. But technological innovation and policies that encourage renewable power and natural gas can do wonders. Africa has barely harnessed its renewables. Only 7% of the continent's hydropower potential and less than 0.7% of its wind potential has been brought onstream. Solar power is in its infancy. Meanwhile, gas is flared instead of powering homes and businesses. In short, there is no reason why the demands of equity cannot be met (to provide Africans with the basic services that those in the rich world expect) and do so without exacerbating the risks associated with climate change.

That combination would be extraordinary. When eyeglasses became widely available in Europe, they stretched out what a man or woman could do, making the unimaginable possible. Powering Africa will have the same transformative effect, bringing hours of life after dark to millions at present denied it. Who knows to what wonderful uses those hours will be put? In 2014 Africa will start to find out. ■

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