

Why Africa Needs Fossil Fuels

The bulk of Africa's energy comes from renewables, that's the problem. To reduce poverty the continent needs more fossil fuels.

It will take more than windmills and solar panels to give 900 million sub-Saharan Africans the power they need to rise from poverty. Alex Webb

by Bjorn Lomborg

Africa is the world's most "renewable" continent when it comes to energy. In the rich world, renewables account for less than a tenth of total energy supplies. The 900 million people of sub-Saharan Africa (excluding South Africa) get 80 per cent of their energy from renewables.

A person in Europe or North America uses 11,000 kilowatt-hours per year on average (much of it through industrial processes), while a person in Sub-Sahara Africa uses only 137kWh – less than a typical American refrigerator uses in four months. More than 600 million people in Africa have no access to electricity at all.

All this is not because Africa is green, but because it is poor. Some 2 per cent of the continent's energy needs are met by hydro-electricity, and 78 per cent by humanity's oldest "renewable" fuel: wood. This leads to heavy deforestation and lethal indoor air pollution, which kills 1.3 million people each year.

What Africa needs, according to many activists, is to be dotted with solar panels and wind turbines. But when US President Barack Obama hosted a summit of African leaders in 2014, most said they wanted more fossil fuels. In the words of Tanzanian Minerals and Energy Minister Sospeter Muhongo: "We will start intensifying the utilisation of coal. Why shouldn't we use coal when there are other countries where their CO₂ [carbon dioxide] per capita is so high?. We will just go ahead."

Europe and North America became rich thanks to cheap, plentiful power. In 1800, 94 per cent of all global energy came from renewables, almost all of it wood and plant material. In 1900, renewables provided 41 per cent of all energy; even at the end of World War II, renewables still provided 30 per cent of global energy. Since 1971, the share of renewables has bottomed out, standing at around 13.5 per cent today. Almost all of this is wood, with just 0.5 per cent from solar and wind.

The International Energy Agency estimates that if all countries fulfil the pledges made at the Paris climate change conference last month, the proportion of renewables could increase slightly in the next 25 years, to 18.7 per cent. In the International Energy Agency's more likely scenario, the share will reach just 15.4 per cent.

COW MANURE AND WOOD

Most of that "renewable" energy will still come from crop residue, cow manure, wood, and biofuels. While a solar panel can provide energy for a light bulb and a charge for a cell phone, it does little to help run stoves to avoid indoor air pollution or fridges to keep vaccines and food fresh, much less power agriculture and industry. By 2040, in the IEA's optimistic scenario, solar power in sub-Saharan Africa will produce 14kWh per person per year, less than what is needed to keep a single two-watt LED permanently lit. The IEA also estimates that renewable power will still cost more, on average, than any other source – oil, gas, nuclear, coal, or hydro, even with a carbon tax.

Few in the rich world would switch to renewables without heavy subsidies, and certainly no one would cut off their connection to the mostly fossil-fuel-powered grid that provides stable power on cloudy days and at night (another form of subsidy). Yet Western activists seem to believe that the world's worst-off people should be satisfied with inadequate and irregular electricity supplies.

In its recent Africa Energy Outlook, the IEA estimates that Africa's energy consumption will increase by 80 per cent by 2040; but, with the continent's population almost doubling, less energy per person will be available. Although nearly 1 billion additional people will gain access to electricity by 2040, 530 million will still be cut off.

But the IEA outlines another possible future – what it calls the "African Century" – in which Africa's governments and donors invest an extra \$US450 billion (\$640 billion) in energy. This would sharply increase the use of fossil fuels, reduce much of the most polluting renewables, and provide energy access to 230 million more people. Providing more – and more reliable – power to almost two billion people will increase GDP by 30 per cent in 2040. Each person on the continent will be almost \$US1000 better off every year.

In Western countries, environmental campaigners would focus on the downside – 300 million tonnes of additional CO₂ emissions in 2040, and higher outdoor air pollution from greater reliance on coal power – and ask why anyone would want to increase CO₂ and air pollution. But let's look at the costs and benefits.

The almost 4 billion extra tonnes of CO₂ emitted over the next 25 years would cause about \$US140 billion in damage from global warming, using the US official (though, likely somewhat exaggerated) social cost figure. The increase in coal use would lead to more air pollution, costing about \$US30 billion during this period.

One day, innovation could drive down the price of future green energy to the point that it lifts people out of poverty more effectively than fossil fuels do. Globally, we should invest much more in such innovation. But global warming will not be fixed by hypocritically closing a path out of poverty to the world's poor.