

One-Quarter of World's Population Lacks Electricity

Replacing wood and coal with electricity could help reduce poverty and pollution

Nathanial Gronewold • November 24, 2009



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Some 130 years since Thomas Edison's breakthrough with artificial light, nearly a quarter of humanity still lacks electricity, a fact officials here want delegates to the [upcoming U.N. climate talks](#) to consider.

Vast swaths of the world also have no access to [modern fuels](#) like natural gas, kerosene or propane, relying instead on wood or charcoal as principal sources of energy. Switching to energy sources that are more efficient and less detrimental to human health is a prerequisite for raising billions out of poverty as nations promised to do, U.N. officials point out.

In a follow-up to the [International Energy Agency's](#) "World Energy Outlook 2009" report, the U.N. Development Programme released its own compilation of data on energy access, with a focus on the developing world. The statistics present a stark picture that officials [hope](#) will resonate at climate negotiations in Copenhagen.

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An estimated 79 percent of the people in the [Third World](#) -- the 50 poorest nations -- have no access to electricity, despite decades of international development work. The total number of individuals without electric power is put at about 1.5 billion, or a quarter of the world's population, concentrated mostly in Africa and southern Asia.

The 1.5 billion figure represents an improvement over previous years, but not because of any concerted effort to expand power connections. Rather, it is a consequence of rapid [urbanization](#) with populations moving to electricity and not the other way around, said Fatih Birol, IEA's chief economist.

"This is very bad and is something that the energy community and others should be ashamed of," Birol said. The amount of electricity consumed in one day in all sub-Saharan Africa, minus South Africa, is about equal to that consumed in New York City, an indicator of the huge gap in electricity usage in the world.

The problem is most acute in sub-Saharan Africa, with several entire nations there effectively nonelectrified. In 11 countries, all in [Africa](#), more than 90 percent of people go without electricity. In six of these -- Burundi, Chad, Central African Republic, Liberia, Rwanda and Sierra Leone -- 3 to 5 percent of people can readily obtain electric power.

In 14 nations worldwide, less than 10 percent of people have the option to use modern cooking fuels, relying instead on wood scavenged from the countryside. All told, about 2.5 billion people globally subsist on wood or charcoal. With so much attention on the energy consumption habits of larger economies in the climate talks, the report's authors say they worry that the plight of those without any modern power is being willfully ignored.

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A quarter of the world is disconnected from debates over clean energy "because their reality is much more basic than that," said UNDP's director of development planning, [Olav Kjørven](#). "They carry heavy loads of water on their backs because they don't have transport. They cook over [wood fires](#) that damage their health, not with electricity, gas or oil."

Other nations have succeeded in mass electrification only through large-scale, top-down efforts by central governments, most notably the mass rural effort in the 1930s in the United States and more recently in [China](#). But development officials say this model is not suitable for [Africa](#) because central governments there lack the cash to make it happen.

"It's fair to say there's been a pendulum kind of swinging back and forth, as is often the case, when it comes to the views of how to scale up infrastructure investment, not least in the areas of energy," Kjørven said. "We have been through a pretty long period in the 1990s and way into this decade where this was widely seen as something that the private sector should do, or through partnerships between the public and the private sector."

Birol said he and others are having trouble getting the message across, encountering some criticism that having 1.5 billion without electricity is a good thing as this prevents the further release of heat-trapping gases to the atmosphere.

They dismiss this outright, insisting that [expanding electricity](#) access to this segment, even with fossil-fuel-based sources, would have only a minuscule impact on global warming.

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"We have calculated that if all these people would have electricity access -- that is, universal electricity access throughout the world -- global CO2 emissions will increase only 0.9 percent, which is peanuts," Birol said.

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