GRASSROOTS

Energy substitutes in developing countries essentially cost more

Millions of households in the developing world still lack access to safe and reliable energy – and pay high prices for poor-quality substitutes.

Addressing their needs poses a major challenge for the governments of developing countries and for all participants in the energy sector – private firms, financiers, regulators, NGOs and donors, and multilateral and donor agencies.

The International Bank for Reconstruction and Development this year published a resource, "Energy Services for the World's Poor", to help address this challenge.

Its main theme is how a developing country's government concerned with tackling poverty among its citizens should think about its role in the energy sector. What kinds of energy policy and projects are likely to have the most beneficial and sustainable impact in terms of alleviating poverty? And where should energy policy advisers concerned with promoting development and improving the lot of the poor focus their efforts?

These critical questions lie at the heart of the debate about how much emphasis development policies should place on economic growth and how much on the attempt to directly improve the lot of the poorest.

Poor communities typically rely on diverse sources of energy – wood, dung, thatch, straw, coal and paraffin – using one fuel for heating, another for cooking or lighting and another for agricultural or productive activities.

Often the real (per unit) costs of these alternative energy sources are high in relation to electricity or gas delivered through networks to wealthier households. Moreover, these energy sources often have high non-monetary costs.

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When women and children spend many hours collecting firewood or dung for heating and cooking, for example, their health often suffers from the heavy loads and long distances, and they have less time for education and for developing other productive activities. The use of traditional pollutant-causing energy sources can also have serious health and environmental consequences.

It has been found that energy services for lighting, cooking, refrigeration and power for electronics are provided cheaply and conveniently, and with the least pollution when they are derived from electricity or gas networks.

Moving from traditional to modern fuels can thus dramatically raise the effective incomes of low-income households.

Research shows the choice of household cooking fuel correlates to a country's per capita gross national product (GNP). In South Africa, classified as a middle-income country with a per capita GNP of $2 880, 42,5 percent of households use electricity and 2,8 percent use gas for cooking, while 27,9 percent use so-called basic fuels (wood, dung, thatch and straw) to cook.

Compared with a low-income country, like the Ivory Coast which has a per capita GNP of $700, no households use electricity, 7,4 percent use gas and 68,1 percent use basic fuels.

Again, in low-income countries virtually none of the poor use electricity and gas for cooking. In Nicaragua, with a GNP per capita of $390, only 0,6 percent of the poorest quintile (20 percent) of people use electricity and gas, compared with 54,4 percent of the richest quintile using advanced fuels, while 98,6 percent of the poorest quintile use basic fuels compared with 40,4 percent of the richest quintile.

The facts for South Africa are that only 5,2 percent of the poorest use advanced fuels for cooking, compared with 93,2 percent of the richest. And 68,5 percent of the poorest use basic fuels compared with 0,4 percent of the richest.

The World Bank recently surveyed power reform in 115 developing nations in terms of whether steps had been taken to privatise the existing assets of the energy sector and to corporatise them through setting up an appropriate legal and regulatory framework. On a range from 0 to 6 – worst to best in terms of this test of power reform – South Africa scored 5, tying with Kenya as the highest score in Africa and with Brazil and Bolivia in Latin America.

In the rest of Africa, the Ivory Coast followed at 4 and at 3 Mozambique, Malawi, Gabon, Senegal and Morocco. Zimbabwe, Uganda, Ethiopia and Ghana scored 2, while Botswana, Namibia, Zambia, Burundi, Tanzania and Egypt came in at 1. All other African countries scored 0, meaning no steps to reform the energy sector had yet been taken there.