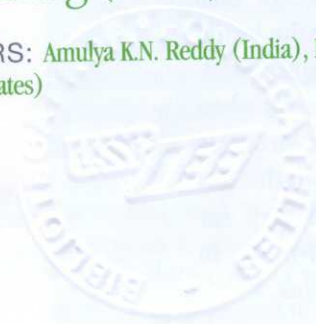


# rural energy in developing countries

CHAPTER 10

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**ABSTRACT**

Supplying modern energy services to the 2 billion people who still cook with traditional solid fuels and lack access to electricity is probably one of the most pressing problems facing humanity today. The amount of energy needed to satisfy the basic needs of rural populations around the world is relatively small, and appropriate technologies are available. However, widening access to modern energy services is limited by the extreme poverty found particularly in the least developed countries.

Living standards in rural areas can be significantly improved by promoting a shift from direct combustion of biomass fuels (dung, crop residues, and fuelwood) or coal in inefficient and polluting stoves to clean, efficient liquid or gaseous fuels and electricity. Although consumers tend to shift to these modern, higher-quality energy carriers as their incomes rise and the carriers become more affordable, the process is slow. Yet a shift to such carriers can reduce the damage to human health and the drudgery associated with continued reliance on inefficient, polluting solid fuels.

This chapter describes experience with and prospects for improving the technologies used to cook with biomass in several countries, as well as the development of clean, non-toxic cooking fuels. Progress in rural electrification—using both centralised, grid-based approaches and small-scale, decentralised technologies—is also described.

Technological developments alone, however, will not improve access or promote greater equity. New institutional measures are also needed, including financing to cover the initial capital costs of devices and equipment. Energy initiatives will be most successful when integrated with other policies that promote development. And because local populations will ultimately use, maintain, and pay for energy services, they should be involved in making decisions about energy systems. ■