



## **The Rise of Renewable Energy**

With the price of oil soaring over \$80 per barrel, many countries in the Asia-Pacific region are seeking alternatives. Some can turn to coal, for example, or natural gas, but nowadays they are also more optimistic about renewable energy.

A new report from UNDP, *Overcoming Vulnerability to Rising Oil Prices*, explains the potential. It looks at renewable energy technologies such as small hydro plants, wind turbines, solar panels, and stoves burning 'biomass'. These are now far more widespread and are proving their worth. Options that just a few years ago might have seemed futuristic are now entering the mainstream. As Nandita Mongia, UNDP Regional Advisor on Energy, points out: "If these are futuristic, then the future has already arrived".

Renewable energy sources are of course environmentally attractive. They produce much less pollution and greenhouse gases. But the real reason for their rising popularity is their falling cost. Even before the recent oil price hikes, greener forms of energy had become increasingly competitive – as smarter technology and economies of scale drove prices down. Large-scale hydropower is already a mainstay of many electricity grids but many national grids are now also taking power from a range of other renewable resources. China, for example, is the leader in the use of small hydro systems. India is a pioneer in wind turbines. And biomass systems are also producing significant amounts of heat and power – as in Indonesia, for example, the Philippines, Sri Lanka, Thailand and Viet Nam.

Renewable sources bring some of their greatest benefits, however, to remote rural areas which national grids do not reach. Here people often have to rely on diesel or gasoline-powered generators. Now, as the Report points out, they can get much cheaper electricity from for example, small hydro schemes and solar home systems for lighting.

The main problem for renewable energy technologies is that they demand significant up-front investment. This can put them out of reach of the rural poor. To help them jump this hurdle, some governments have offered large subsidies to draw the private sector into the market, but have had limited success. The report suggests an alternative strategy: "Instead of withdrawing to let private markets develop on their own, a better approach would be to work alongside local communities and the private sector to remove barriers and reduce risks."

For transport the principal renewable energy options are bioethanol or biodiesel. They too are becoming more popular. But the report argues caution. Biofuels help reduce oil imports and produce less greenhouse gases and pollution. But they are not so benevolent when it comes to cultivation. Turning over vast areas of land to 'biocrops' such as corn or palm will displace other crops and can drive up food prices, while causing environmental damage and water shortages. And although this may produce more jobs, the workers on plantations often face very poor working conditions. The Report concludes: "The developing countries of the Asia-Pacific region will need to proceed carefully, examining not just the macroeconomic issues, but also the costs and benefits for the environment and for poor communities".