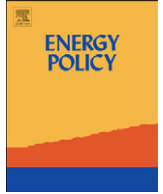


Contents lists available at [ScienceDirect](#)

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

Introduction to Section 3—Renewable energy

Renewable energy looks set to play an increasing role in the UK energy mix as awareness of climate change combines with rising oil prices. To date, the UK has scarcely begun to tap the potential of wind power, perhaps the simplest form of renewable energy to use in bulk, by comparison with other developed nations. The scope for future major development in windpower is discussed here by Tavner.

As Boreland and Bagnall suggest, solar electricity is another major resource that is bound to grow in importance. Here the UK may lose out as a technology leader. The major developments may come from countries that can use innovation in electronics and nanotechnology to develop future solar collectors.

The same may not be true of offshore energy, where the UK's long experience of oil exploration means that the country has expertise in building and using high technology in hostile waters. As Mueller and Wallace explain, substantial engineering problems must be addressed before the large wave, tidal and other energy resources that are available offshore can be used reliably, safely and economically.

Bioenergy, the use of plant material for fuel, is also a technology in which the UK had a lead. The scope goes beyond burning crops for energy directly, with biorefineries producing transport fuels and future generations of crops being designed to offer far greater efficiencies. These issues are discussed by Taylor.

Although some renewable energy technologies operate on a large scale, many lend themselves to micro or local level generation. This raises the issue of who might own future energy systems. Might there be a role for community groups? And on what scale is a community—would a street, or a whole city, take responsibility for its own energy supply? If it did, what backup would it need from national systems, and would it be able to sell the energy it did not use? These questions are discussed by Walker.