Topic Page: Ocean wave power

Definition: **wave energy** from *The Penguin Dictionary of Science*

The generation of power from the energy of water waves. Such a source of energy is environmentally clean, but technically very difficult to achieve, and very few economically viable generators of wave power have been produced.

Image from: **Wave power** in *Dictionary of Environmental Science and Technology*

Summary Article: **wave power**
From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Power obtained by harnessing the energy of water waves. Various schemes have been advanced since 1973 when oil prices rose dramatically and an energy shortage threatened. In 1974, the British engineer Stephen Salter developed the 'duck' – a floating boom, the segments of which nod up and down with the waves. The nodding motion can be used to drive pumps and spin generators. Another device, developed in Japan, uses an oscillating water column to harness wave power. A major technological breakthrough will be required if wave power is ever to contribute significantly to the world's energy needs, although several ideas have reached prototype stage.

A UK government adviser on wave power concluded in a 1998 report that wave power devices have been improved to such a degree as to have become economically viable. The 'duck', for example, can generate electricity at 2.6 pence per kilowatt hour, compared with 2.5 pence for a gas-fired power station and 4.5 pence for a nuclear-powered one.

The world's first commercial wave power generator was commissioned in November 2000 in Islay, an island off the west coast of Scotland. The LIMPET facility (which stands for Land Installed Marine Powered Energy Transformer) has a top potential energy generation capacity of 500 kW, enough to supply power to 400 homes.

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