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Water Project Data Entry Form
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(type or print clearly)

AUTHORIZATIONS: (2 or 3 initials, be consistent)

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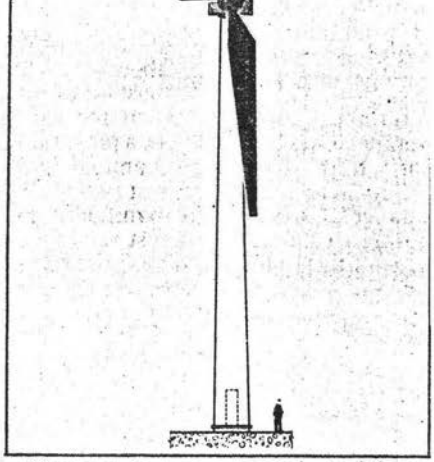
£609 500 for four schemes. The most ambitious is the first phase of a wind farm in North Devon, which will eventually comprise three turbines, generating 200 kW each.

The idea for the scheme comes from the Wind Energy Group, a consortium of Taylor Woodrow Construction, British Aerospace and GEC Energy Systems. The group has already designed and built a 250-kW horizontal-axis machine on the Orkney Islands with two blades 20 metres in diameter. It began supplying power to the grid in September last year.

The machines that the group wants to build in North Devon will be a similar size, but with three blades to cope more efficiently with Devon's winds, which are far less harsh than those of the Orkneys. "The Orkneys have the best conditions for wind power in the world," a spokesman said. "Those on the north coast of Devon are typical of more sites worldwide." He would whether to go ahead lies with the group's managers. They are unlikely to give a final go-ahead for another two months.

Under last year's Energy Act, the South Western Electricity Board would have to buy any electricity the wind farm produced. A spokesman for the board said: "We're aware that it is going on, but it's not our project. If they are able to generate electricity then we would buy it."



First step to a commercial wind farm

The other big British project offered money is a 200 kW vertical-axis wind of a multi-megaw
Vertical Axis Wi

Scoop technology helps solve Ethiopian water prob

A DISCARDED horse-drawn scoop, discovered by chance in an Australian farmyard, is providing scientists with a promising technology to help solve Ethiopia's water supply problems. The scoop, rusty and unused since 1930, was found by Frank Anderson, researcher with the International Livestock Centre for Africa (ILCA), who photographed it while on holiday in central Queensland. On return to ILCA, in Addis Ababa, he and some colleagues redesigned the scoop to suit Ethiopian conditions. And it was used successfully to dig a pond at the centre's Debre Berhan research station in the Ethiopian highlands.

Farmers in Ethiopia face severe seasonal water shortages. During the long dry season many spend half of each day trekking their animals to water at distant springs and wells, wasting valuable time they could spend on more productive work, while their animals lose both condition and productive output. Women too must walk long distances to fetch drinking and washing water.

Although bringing water closer to the home would help families, the technology needed to do so has not yet reached Ethiopia from Europe, the US or Australia, where is was widespread during the 19th and early 20th century. Yet in Ethiopia such technology should be easily acceptable to farmers and infinitely preferable to the alternatives: digging ponds by hand, which is too labour-intensive, or by heavy machinery, which is too expensive.

But transferring intermediate technology is seldom straightforward. In Ethiopia the heavy clay soils and smaller draught animals represented challenging local conditions, and the scoop found in Australia had to be redesigned to cope. ILCA's agricultural engineer, Abiye Astatke, came up with a smaller, lightweight model (45 kilograms) designed for two zebu oxen to pull.

The redesigned scoop, made of sheet metal with wooden handles for the driver, costs less than $150 to make and should last for three to four years. Provided steel is available, it can be made in a local metal workshop without sophisticated equipment. Unlike more expensive machinery, it presents no training, maintenace or repair problems.

Researchers at the centre tested the scoop by digging a large
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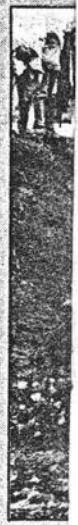

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New Scientist February 2, 1984