



### Tidal power

## Green on green

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### Environmentalists square up over an ambitious tidal power plan

FOR all its stirring rhetoric, the government's record on renewable energy is poor. Geographically, Britain is ideally placed, enjoying (or enduring) some of the windiest weather and heaviest seas of any European country. Yet in 2005 (believe it or not, the most recent year for which comparable figures are available) Britain got less than 2% of its energy from renewable sources (mostly wind). This was considerably below the European average of 6.7% and far behind countries such as Denmark (16.2%) or Sweden (29.8%).

One single project could provide an enormous boost. The river Severn, Britain's longest, which flows from Wales to the Bristol Channel, has a tidal range of 15 metres, the second highest in the world. Engineers have long fantasised about harnessing all that energy, and with climate change and energy security now pressing political problems, ministers are taking them seriously. On January 26th the government published a shortlist of possible projects, including three barrages (essentially gigantic dams) and two tidal lagoons (man-made tanks in the sea which fill up and empty with the tide).

It is easy to see the attraction of such schemes. Tidal energy is the best-behaved of renewable sources. Unlike wind or wave power (or even hydroelectricity, which depends on the rain), tides—governed by the immutable laws of celestial mechanics—are predictable. The sheer size of some of the plans are impressive too. When the tide is flowing fastest, the biggest option—a ten-mile, £22 billion barrage running from Weston-super-Mare to Cardiff (see map)—could generate 8.6 gigawatts, around a seventh of Britain's peak consumption and more than every other renewable-electricity source combined. Although its average output would be far below its peak, it could still supply around 5% of Britain's electricity every year.

Such a scheme could put a noticeable dent in British carbon emissions, but greens concerned about the local environment are unhappy. The Severn estuary is an important habitat for birds; large barrages would destroy or damage much of it, as well as interfere with fish stocks in the river. Friends of the Earth, an environmental lobby group, thinks offshore lagoons might be a useful compromise.

Others object on economic grounds. Ministers admit that the biggest proposal would require taxpayer funding. A report by Frontier Economics, a consultancy, argues that the same amount of renewable power could be obtained more cheaply with other technologies such as wind turbines. A barrage could affect shipping into Bristol, a big port. Some simply think it would be an eyesore.

A final decision on what project to go for and when is at least a year away. The Conservatives (who may well be in power when it is taken) say they are not opposed; yet even if construction went ahead it could hardly be finished until after 2020.

But there are other reasons too for politicians to support the project. Like the Hoover Dam, built at the height of the Great Depression in America, a Severn barrage, the British government claims, could create tens of thousands of jobs and lots of work for firms. And as one of the world's largest engineering projects, it would, of course, be a long-lasting monument to whichever politician approved it.

