

Green on green -- Worksheet

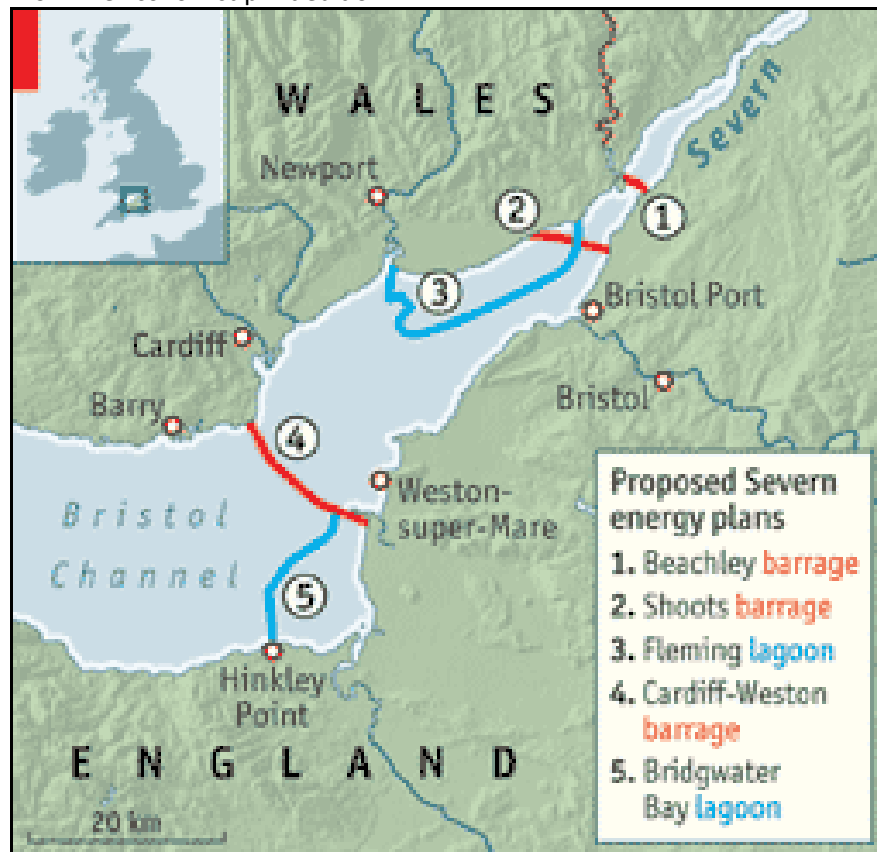
Before you read

1. What do 'green' politicians want? *Discuss the following ideas.*
 - a. They want to protect the environment.
 - b. They want to reduce the effects of global warming by cutting the production of greenhouse gases produced by the use of fossil fuels like petrol, gas and coal.
 - c. They don't like nuclear energy because of the risks of radiation from accidents at nuclear power stations (such as Three Mile Island in the US, and Chernobyl in Ukraine) and they are concerned about the production of large quantities of radioactive waste materials.
 - d. They want to encourage the use of natural, renewable sources of energy such as solar energy, wind energy, tidal energy, wave energy, and geothermal energy.
 - e. They don't want to see large **solar energy plants**, wind turbine farms, tidal energy barriers, long strings of wave energy collectors, geothermal energy plants.
 - f. They want change, but they don't want change.
2. Now read the article and look at the map.

Green on green

Jan 29th 2009

From *The Economist* print edition



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Environmentalists square up over an ambitious tidal power plan

1. 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%).
2. 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).
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.

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After you read

1. Select a title for each of the seven paragraphs.
 - a. Greens unhappy with impact on environment. Paragraph ____
 - b. Providing employment. Paragraph ____
 - c. The Severn Tidal Power Project. Paragraph ____
 - d. Tidal Power is predictable. Paragraph ____
 - e. Economic Objections. Paragraph ____
 - f. Britain fails to exploit its renewable energy potential. Paragraph ____
 - g. A long wait for the benefits. Paragraph ____
2. Are these statements true or false according to the article?
 - a. Geographically, Britain is in a good position to exploit solar energy. TRUE | FALSE
 - b. Britain produces less energy from renewable sources than European neighbours. TRUE | FALSE
 - c. The Severn is Britain's longest river. TRUE | FALSE
 - d. Government ministers are considering possible projects to harness tidal power in the Severn Estuary because voters are concerned about energy security and climate change. TRUE | FALSE
 - e. 25% of Britain's peak energy consumption could be provided from a large barrage built across the Severn Estuary. TRUE | FALSE
 - f. A large barrage could damage the environment for birds and fish, interfere with ships entering Bristol harbour and would be an eyesore. TRUE | FALSE
 - g. The barrage would be a long lasting monument to the career of the politician who decided to build it, but actual energy benefits would not be immediate. TRUE | FALSE
 - h. The Hoover Dam, which was built during the Great Depression in the USA, provided a valuable source of energy and created many jobs for working people. TRUE | FALSE
3. Complete the crossword by answering the clues.

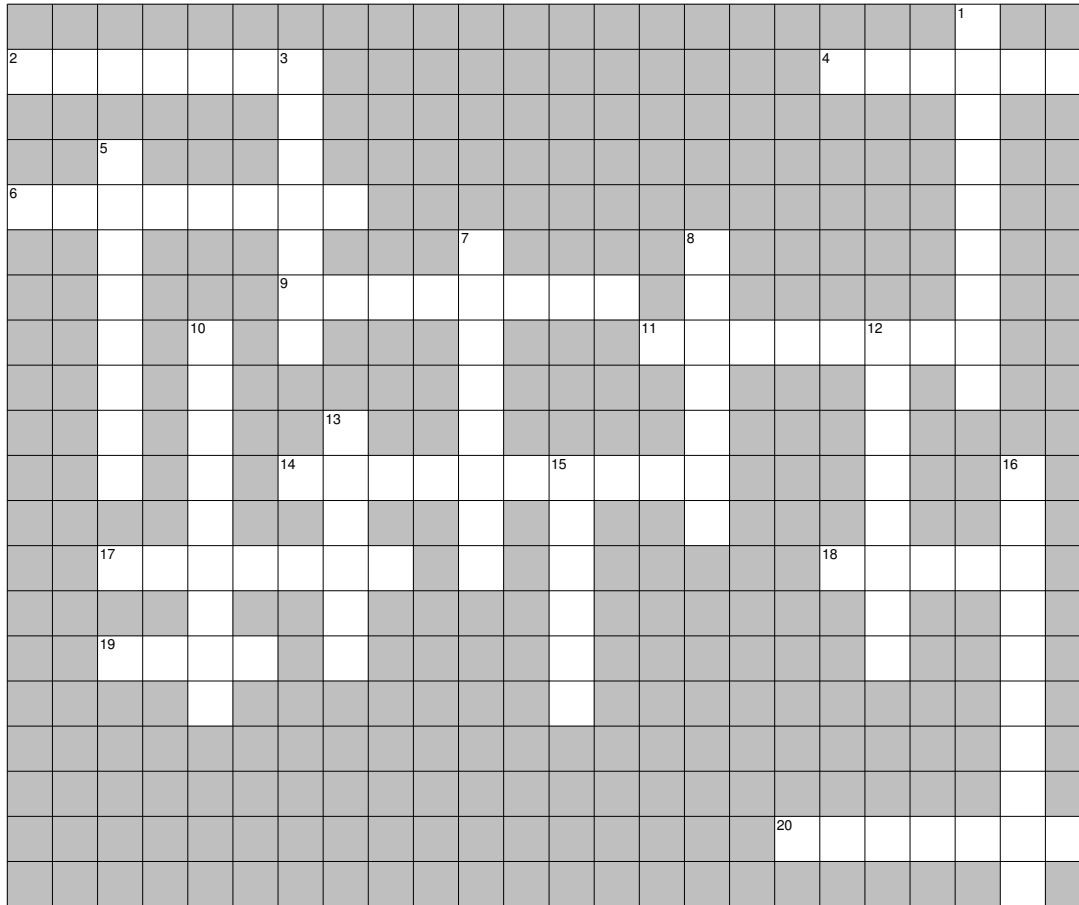


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EclipseCrossword.com

Across

2. an array of blades around a central axis (7)
4. another word for a plan (6)
6. most windy (8)
9. language that is used to persuade or influence people (8)
11. a plan or suggestion (8)
14. controlling or using (10)
17. The name of an important port in the Severn estuary (7)
18. adjective referring to the daily movement of the sea (5)
19. a depression in a surface (4)
20. an area where people or things live and grow (7)

5. experiencing something with some pain (8)
7. a record often made in stone or metal celebrating a life or an achievement (8)
8. a barrier to restrict the movement of water (7)
10. gases, liquids or other things which are emitted during a process (9)
12. safety (8)
13. an area of the sea partially surrounded by land (6)
15. the name of the longest river in Britain (6)
16. a person who operates in parliament and or government (10)

Down

1. adjective used to refer to energy sources which are always available (9)
3. something which is considered to be very ugly (7)

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Teachers' Notes and Key

Before you read

Use the statements about 'green' arguments to review key vocabulary and bring out the key contradiction in 'green' policies which is at the core of the article.

After you read

- 1 a4, b7, c2, d3, e,5 f1, g6
- 2 a false, b true, c true, d true, e false, f true, g true, h true
- 3



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