

Plans to unleash tidal lagoon's power

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PLANS for a futuristic tidal lagoon in the same stretch of water as a controversial windfarm have been outlined.

The pioneering energy project in Swansea Bay has been backed by consultant engineers WS Atkins, which says the scheme is a viable option.

Tidal Electric, which has been carrying out tests in Swansea Bay, now plans to seek planning permission for the £79m "tidal lagoon".

Tidal Electric says the lagoon project would have none of the controversial visual intrusion associated with huge offshore wind farms.

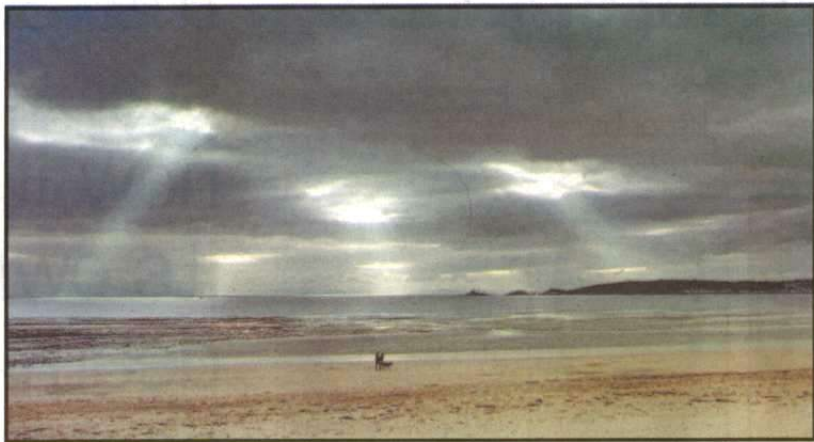
Plans for 30 wind turbines, each 440ft tall off Porthcawl are currently being fought by thousands of protesters concerned about their "power plant effect" spoiling the traditional sea view.

A spokesman for Tidal Electric said yesterday, "Tidal lagoons will have minimal effects on the marine environment.

"And they will actually foster biodiversity by providing new habitats for fish and birds.

"The structures, situated a mile or more out to sea, will only have a low profile. It will look like a small island or rocky shoreline."

Tidal Electric's chairman, Peter Ullman, says electricity can be



produced from the lagoon at 3.4p per kilowatt hour, less than half the price of wind-power produced electricity which requires millions of pounds of government subsidies.

The Swansea Bay lagoon is designed to provide a mean 60 megawatts of power and while the Scarweather Sands wind farm would produce 108mw at maximum usage, the average output is expected to be 35-40mw because of the unreliability of winds.

A much bigger tidal energy pro-

ject, a possible Severn tidal barrage near Lavernock Point, is still being discussed.

This would take seven years to build but would produce 8,000mw, more than several nuclear power stations.

Friends of the Earth Cymru is strongly backing the lagoon idea.

The groups wants the Welsh Development Agency and the Welsh Assembly to take a favourable view of tidal lagoon developments.

The lagoon, around two square

miles, would be built of rock, sand and gravel and would hold water at high tide and create power by releasing that water back at low tide, turning hydro-electric turbines.

Wind-farm opponent Ioan Richard said, "If the technology has been approved independently what are we waiting for? It is better

than despoiling our ancient landscapes and seascapes with giant, steel structures which harm birds and cause visual scars."

United Utilities, the firm behind Scarweather Sands, denies the wind farm would be visually intrusive, saying it could actually attract tourists rather than repel them.

Neil Crumpton of Friends of the Earth Cymru said tidal energy had to be supported alongside solar, wave, wind, biomass and other alternative energy sources.

Pros and cons

Advantages of a tidal energy plant

- Once the barrage or lagoon is built, tidal power is free.
- It produces no greenhouse gases or other waste.
- It is not visually intrusive compared to huge wind turbines.
- It needs no fuel.
- It produces electricity reliably 10 hours a day.
- Not expensive to maintain.
- No effect on birds.

Disadvantages

- Only produces electricity 10 hours a day (when tides are flowing).
- There could be environmental effects such as reduced tidal flow and silt build up (less so for smaller lagoon projects).
- There are only a few sites around the UK suitable for tidal power stations.

ENERGY:

Swansea Bay, where tides could be harnessed for energy
Picture: Dragon News

He is concerned the Department of Trade and Industry is treating it as "far off experimental" technology instead of supporting it now.

The Government wants 20% of energy to be produced by renewable sources by 2020.

Around 70% of Britain's energy is currently from coal or gas, 21.5% from nuclear and only 4% from renewables.

