

## Coal and Severn Barrage plan for Welsh energy

*They really don't have anything coordinated. I'd like to see a salt-water barrage last for 150 years and generate 3,000 MW!*

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A £10 billion-plus Severn Barrage generating as much power as two nuclear stations for the next 150 years and more is among the options for safe, secure and sufficient energy supplies recommended to the UK Energy Review by the Welsh Assembly Government.

The Severn Barrage should be accompanied by development of new technologies to extract energy on a long-term basis from underground coal reserves, together with more attention to energy efficiency and micro-generation opportunities, the Assembly Government says.

In a submission to the Review, Wales Energy Minister Andrew Davies, highlights the global imperative of addressing climate change while addressing the energy needs of a strong and internationally competitive Welsh economy.

The Welsh Assembly Government energy vision therefore aims to develop low and zero carbon technologies and develop cleaner fossil fuel technologies while advancing economic prosperity.

Among the key, mid-to-long term options of greatest interest are renewable energy sources, clean fossil-fuel technologies and the exceptional opportunity presented by building a barrage between Lavernock, near Cardiff, and Brean Down, near Weston-super-Mare to tap the enormous tidal energies in the Severn estuary.

"The barrage would be equivalent to around two nuclear power stations operating continuously, lasting not 40 to 50 years with a problematic legacy but operating for 150 years plus," says Andrew Davies, Minister for Enterprise, Innovation and Networks, and Energy Minister for Wales.

"Throughout its life the barrage would produce zero-carbon electricity on a totally predictable, low-cost and reliable basis, which could also have considerable long-term financial investment attractions," the Minister says.

"While the construction of any barrage would require dealing with some significant environmental and engineering challenges, the Assembly Government and the South West England Regional Assembly now consider it appropriate to re-examine the Severn barrage proposals in depth."

Turning to other options, the growing interest on the part of large energy companies in exploring low-carbon emission, fossil fuel technologies is reassuring, writes Mr. Davies., and, there is no doubt that clean coal and gas fired fuel power stations will play a major role in Welsh electricity production for the next 20 years and more, with Wales about to play an important UK gas supply role through the £2 billion Liquid Natural Gas developments underway at Milford Haven, in West Wales.

Building on the existing example of the world's highest efficiency gas turbine power plant at Baglan, Wales would welcome projects, to explore and demonstrate more

advanced technologies such as super efficient power stations and carbon dioxide capture and underground storage.

"Also attractive are other new technologies for extracting energy from underground coal reserves, which, combined with carbon capture and storage, could create a major indigenous Wales and UK low carbon energy source and we commend the DTI to work with us in developing this area."

The pursuit of renewable energy production both large scale and through micro-generation is a priority in Wales and the Assembly Government has set ambitious targets for boosting renewable energy generation, the Minister says. While wind energy is currently the most commercially attractive source, bio-mass energy (including energy generated from waste), solar power and wave-powered energy, all have considerable potential in Wales.

Mr. Davies notes: "Our renewables objectives embrace far more than wind-power. We want to see a wide range of other technologies developed both at the large and small scale. We are making considerable progress on a range of biomass projects – especially in locally supplied heating systems for public sector buildings such as schools, leisure centres and the new, BREEAM rated Assembly building in Cardiff Bay.

"In addition we already have substantial hydro power and pumped storage systems with potential for more.

"The growth and use of energy-related bio-mass, with its capacity to produce heat, electricity, vehicle fuels and new chemical food-stocks, underpinned by the world class technology resource at IGER, the Institute of Grassland Research at Aberystwyth, could provide significant opportunities in Wales.

"In the solar field, we are already home to the European arm of Sharp, the world leader in photo-voltaics and leading edge academic expertise," he adds.

"The need for the world to move as quickly as possible to a low carbon energy economy, whether through large scale generation, energy efficiency or microgeneration, offers enormous opportunities which the Welsh Assembly Government believes can most effectively be seized through strong partnerships, not only with the private sector but also in conjunction with Whitehall, universities and local authorities."