

Statement to Parliament: Proposed Swansea Bay tidal lagoon

Mr Speaker,

I would like to make a statement about the proposed Swansea Bay tidal lagoon.

Britain's energy policy towards electricity generation is based on meeting 3 needs:

- ensuring that we can count on secure and dependable supplies of electricity at all times
- minimising the cost of supplies to consumers and taxpayers; and
- meeting our greenhouse gas emission reduction obligations

To these 3 requirements we have added, through our Industrial Strategy, a further ambition:

- to secure long-term economic benefit, in terms of jobs and prosperity, from decisions we make

Our policy has been successful. Britain has one of the most secure and reliable electricity supply sectors in the world. Last winter, one of the coldest in recent years, the margin of capacity in our electricity generating system was over 10%; around twice what it was in 2016 to 2017.

We have the strongest record in the G7 in reducing our greenhouse gas emissions. Between 1990 and 2016, the UK reduced its emissions by over 40%.

We have massively increased our deployment of renewable generation. Renewable electricity now makes up almost 30% of our generation, our renewable capacity has quadrupled since 2010, and the auction prices of offshore have fallen from £114 per MWh to £57.50 per MWh within 2 years.

Coal – the most polluting fuel – contributed less to generation in Britain last year than in any since the Industrial Revolution.

This has been achieved while the UK has maintained a position in the overall cost to households of electricity well below the average for major European countries.

But the cost of electricity is nevertheless a significant one for households and for businesses, and the policy related-costs have been growing. We have made a clear commitment to bear down on costs.

It is in this context that the government has assessed whether it should commit consumer or taxpayer funds to the programme of 6 tidal lagoons proposed by Tidal Lagoon Power Limited, the first being the proposed project at Swansea.

We believe in renewable energy and we believe in the benefits of innovation.

The conclusion of this analysis – which has been shared with the Welsh Government – is that the project and proposed programme of lagoons do not meet the requirements for value for money, and so it would not be appropriate to lead the company to believe that public funds can be justified.

The proposal for the Swansea tidal lagoon would cost £1.3 billion to build. If successful to its maximum ambition, it would provide around 0.15% of the electricity we use each year.

The same power generated by the lagoon, over 60 years, for £1.3 billion, would cost around £400 million for offshore wind even at today's prices, which have fallen rapidly, and we expect to be cheaper still in future.

At £1.3 billion, the capital cost per unit of electricity generated each year would be 3 times that of the Hinkley Point C nuclear power station.

If a full programme of 6 lagoons were constructed, the Hendry Review found that the cost would be more than £50 billion, and be 2 and a half times the cost of Hinkley to generate a similar output of electricity.

Enough offshore wind to provide the same generation as a programme of lagoons is estimated to cost at least £31.5 billion less to build.

Taking all the costs together, I have been advised by analysts that, by 2050, the proposal that has been made – which would generate around 30 TWh per year of electricity – could cost up to £20 billion more to produce compared to generating that same electricity through a mix of offshore wind and nuclear, once financing, operating, and system costs have been taken into account.

That could cost the average British household consumer up to an additional £700 between 2031 and 2050, or the equivalent of £15,000 for every household in Wales.

However, in recognition of the potential local economic benefits that might result from a lagoon in Swansea, I asked officials to go back and consider what additional benefit could be ascribed to a number of other factors, including a beneficial impact on the local economy.

For £1.3 billion a Swansea lagoon would support, according to the Hendry Review, only 28 jobs directly associated with operating and maintaining the lagoon in the long term.

Officials were also asked to make an assessment of the potential for valuable innovation and cost reductions for later lagoons that might come from embarking on a programme of construction.

Independent advice concluded that the civil engineering used in Swansea Bay offers limited scope for innovation and capital cost reduction – estimated at 5% – in the construction of subsequent facilities.

I asked for an assessment of the export potential of embarking on a programme

of implementing the technology, but the Hendry Review concluded that it would take a “leap of faith to believe that the UK would be the main industrial beneficiary” of any such programme.

In terms of energy reliability, the generation of electricity would be variable rather than constant with a load factor of 19% compared to around 50% for offshore wind and 90% for nuclear.

The inescapable conclusion of an extensive analysis is that however novel and appealing the proposal that has been made is, even with these factors taken into account, the costs that would be incurred by consumers and taxpayers would be so much higher than alternative sources of low carbon power, that it would be irresponsible to enter into a contract with the provider.

Securing our energy needs into the future has to be done seriously and, when much cheaper alternatives exist, no individual project, and no particular technology, can proceed at any price. That is true for all technologies.

The fact that this proposal has not demonstrated that it could be value for money does not mean that its potential is not recognised.

My department is also in receipt of proposals from other promoters of tidal energy schemes which are said to have lower costs than the Swansea proposal, although these are an earlier stage of development.

Any proposals must be able credibly to demonstrate value for money for consumers and public funds.

I am sure that many people in the House and beyond would wish that we were in a position today to say yes to the Swansea proposals.

I have appreciated the contribution of Charles Hendry, whose constructive report led to this further analysis being made, and to the engagement of the Secretary of State for Wales and members of the Welsh Assembly, including the First Minister and the Leader of the Welsh Conservatives, Andrew RT Davies.

But all of us have a requirement to be responsible stewards of taxpayers' and consumers' money and to act at all times in their interests. It is in discharging that responsibility rigorously that I make this statement today, and I commend it to the House.

[Read the value for money assessment.](#)