The recently issued Hendry review on the strategic case for tidal lagoons has concluded that they have the potential to play a cost-competitive role in the UK’s electricity market, whilst delivering decarbonisation, energy security benefits and valuable opportunities for the UK supply chain. We discuss the key recommendations and observations made in the report.

The review also urges the Government to forge ahead with negotiating a funding deal for the 320MW tidal lagoon currently proposed at Swansea Bay, stressing the learning value and efficiency gains that future schemes could reap from such a “pathfinder” project.

Charles Hendry, former Conservative energy minister, was appointed by the Government in May 2016 to carry out an assessment of the role tidal lagoons could play in the UK’s energy landscape.

The UK has some of the largest tidal ranges in the world and is widely acknowledged as being well placed to take advantage of this nascent technology. However development and funding support for tidal lagoon projects, such as Swansea Bay, have been subject to delays whilst the Government establishes its position on what subsidies will be available going forward.

It remains to be seen whether this positive review will turn the tide for projects such as Swansea Bay or whether further delays will continue to push out deployment timescales.

The report made a number of recommendations and observations for tidal lagoon projects,
1. Potential for Low Long Term Subsidy Costs
The report concludes that a UK tidal lagoon programme has the potential to be valuable and competitive in comparison with other low carbon energy projects.

Based on subsidy cost forecasts, the review estimates that the average additional cost passed on to a household’s annual electricity bill by a smaller-scale pathfinder tidal lagoon project (such as that currently proposed at Swansea Bay) would average 35 to 45p during the first fifteen years, reducing to 20 to 30p between 30 to 60 years in.

For subsequent larger scale tidal lagoons, this figure would be £1.85 to £2.10 in the initial stages, reducing to 50p to £1.40 thereafter. If this analysis proves correct tidal lagoons will be more cost-competitive in the longer-term – i.e. 60 years - than both offshore wind and nuclear power, based on current projections.

2. Support for a Pathfinder Project
The report considers that, at the costs set out above, moving ahead with a small-scale pathfinder project is a “no-regrets” policy, and suggests that there is a very strong case for doing so as swiftly as possible.

Hendry stresses that such a pathfinder would help establish tidal power technology and provide opportunity for subsequent larger-scale projects to benefit from a gearing up of the UK supply chain as well as learning and efficiency gains. The review recognises that the proposed 320MW Swansea Bay tidal lagoon, which obtained development consent in 2015, is the only project currently developed enough to fill this pathfinder role in the near future and urges the Government to swiftly move to final-stage negotiations with the developer, Tidal Lagoon Power.

3. Financing via CfD
A contract for difference (“CFD”) model is suggested as the most appropriate form of Government support for a pathfinder project. Under a CFD model the Government would contract with the developer to set the price received by the project for electricity generated during the contract term (known as the “strike price”), with payments likely to be funded in part via levies on consumers’ electricity bills. The review suggests that a CFD term of no more than 60 years would be appropriate for the pathfinder projects (compared to the 90 years being sought by Tidal Lagoon Power).
Whilst the CFD model could be scalable to subsequent larger projects, the review recommends that an alternative regulatory model should not be ruled out by the Government as an option to support the wider tidal lagoon programme going forward. The review includes extensive analysis of how strike prices for tidal lagoon projects could be formulated and how related costs can be meaningfully compared with other low carbon technologies. The review’s general conclusion is that large-scale tidal lagoons have the potential to be competitive with those technologies by the mid to late-2020s.

4. Site-Specific Competitive Tendering
Hendry also concludes that competition for the Government support for tidal lagoon projects (such as through CFD and associated contracts) should be by a site-specific competitive tendering process (rather than by auction). It is suggested that tendering should be carried out after environmental surveys, but before project consents are secured.

5. National Policy Statement
The review considers that a central level of coordination for a national tidal lagoon strategy would help maximise gains. Hendry proposes that the consenting process for large-scale tidal projects should therefore be informed by a National Policy Statement (NPS), under which the Government designates specific sites as suitable for development.

To avoid damaging delays to the proposed Swansea Bay tidal lagoon, however, the review suggests that this pathfinder should be excluded from the NPS approach.

6. Tidal Power Authority
The review recommends the establishment of an arms-length Tidal Power Authority, accountable for maximising UK advantage from the tidal lagoon programme and ensuring value for money. This body would not have any planning or consenting powers but would be responsible for:

- deciding which locations should be offered to tender and when;
- carrying out initial environmental assessments for specific locations;
- fostering new industry and driving cost reductions; and
- advising the Government (including on the development of the NPS).

Next Steps
The reception of these recommendations by industry has been broadly positive, most of whom are keen for the Government to take steps to place the UK at the global forefront of tidal
power. However, a number of commentators have inevitably questioned the subsidy cost and strike price estimates set out in the review, claiming that they are overly optimistic and stating that the £1.3bn Swansea Bay project remains too expensive.

The review is now being considered further by the Government, which is expected to respond before the next Budget in March this year.

The UK is already leading the way with other forms of tidal power – the first large-scale tidal stream energy farm was launched by Atlantis Resources in Pentland Firth in September 2016. It remains to be seen whether the Government is persuaded by Hendry’s review, and is willing to commit to the long term investment and policy landscape required to extend the UK’s global lead to tidal lagoons.

For further information regarding tidal lagoon projects in the UK please do not hesitate to get in contact with us.

RELATED PRACTICES

Infrastructure

Power

Renewables