

# DECC Severn Tidal Power Consultation

Responses for energy@stroudtown.gov.uk

## General Questions

Q1. Is the Feasibility Study taking the right issues into account?

We are concerned that the headline figure of 5% of electricity supply is misleading and creates bias in the whole process. This figure applies only to the largest (Cardiff-Weston) barrage on the shortlist. Other proposals on the shortlist produce less than 1% and there is little consideration being given to using a combination of smaller schemes in order to achieve a more significant percentage. The smaller schemes are being assessed individually and not collectively.

Q2. Are there other aspects or other evidence that should be taken into consideration?

No Answer

Q3. Have we given due weighting to the different benefits and impacts under consideration in our analysis?

Where secondary benefits are proposed, for example flood protection from rising sea levels or possible rail or road crossings, the value of these benefits should be estimated. For example what is the cost for building a new rail tunnel to replace the current one or what estimates are there for flood defenses for Bristol and Avonmouth?

Q4. Do you think that it is better to wait for new and less environmentally damaging technologies to be developed, or for economic conditions to improve, or to move ahead more quickly with available proposals?

The Feb-09 Partial Impact Assessment p11 states Cardiff Weston barrage is no longer considered deliverable in a 2020 time frame. Since the other schemes produce less than 1% of 2020 electricity demand it would seem there is sufficient time to support study and development of other high capacity and possibly lower environmental impact schemes, the tidal fence and tidal reef concepts as well as shallow water tidal stream technologies. We also think the long term economic benefits of developing these schemes have not been sufficiently considered (see response to Q5 below).

## Chapter 3a - Issues - Regional Economic Impacts

Q5. Do you agree with the conclusions of the DTZ study and are there any other factors that the Feasibility Study should be aware of?

We believe greater consideration should be given to the long term economic impact of using Severn tidal energy to help develop a world leading tidal flow expertise and industry in South West England and South Wales. There exists the potential to support and develop a number of locally based innovators in a range of tidal flow technologies that could exploit the energy potential of the Severn Estuary and develop into significant technologies with potential to be applied world wide. In contrast the construction benefits of a large conventional hydro scheme are limited, largely short term in economic benefit and having little application elsewhere in the world. It is also apparent that much of the construction for a barrage structure would be done at dry docks around Europe and would have little, if any, lasting economic benefit to the region.

## Chapter 3b - Issues - Financing, Ownership and Subsidy Mechanisms

Q6. Do you agree with PwC's analysis on ownership and delivery of a Severn scheme?

No Answer

Q7. Are there any other options for delivery or subsidy that should be considered? Would they be appropriate for all of the tidal power options under consideration?

No Answer

Q8. Government believes that the private sector is best placed to design, build and operate a Severn tidal scheme. Government's role would be to set the conditions in which a scheme could come forward. Do you agree?

No Answer

## Chapter 3c - Issues - Energy Markets

Q9. What are the impacts and potential risks of tidal intermittency on supply / demand balancing and the energy market?

No Answer

Q10. Is it worth considering exploring the option of demand management?

Demand management is essential if renewable and other low carbon generation options are to meet demand. For example the phasing of certain high energy consumption industrial processes to the timing of Severn tidal energy production would make sense particularly when tide times do not coincide with peak demand times. Increased energy storage capacity should also be developed as should more extensive grid interconnection to Europe in order to smooth peaks and troughs in renewable energy supply.

Q11. Do you consider that a Severn tidal scheme could impact on investment in other energy supply capacity, and if so in what ways?

No Answer

## Chapter 4a - Assessment of Tidal Options - Methodology and Conclusions

Q12. Do you agree with the factors that have been used to determine the short-list for further study?

No, we believe that priority should be given to schemes that can be implemented incrementally and can be reversed if they prove to have catastrophic impacts on environment, flooding or other factors. The modeling of geomorphic change for the type of large engineering works proposed cannot be performed with sufficiently high levels of confidence. In particular the erosion and deposition of suspended mud in the estuary is beyond the scope of current models. Hence the impact can not be know until the schemes are complete. It would be expedient to include estimates for removal of any structure that causes more problems than it solves.

Q13. Do you agree that the test of economic feasibility should be relative to the cost of other renewables?

No, it should be relative to predicted long term energy costs which we believe will be much higher than currently forecast. There are many factors from depletion of fossil reserves to carbon pricing mechanisms that will result in increased fuel costs in the future. To reach the carbon reduction targets proposed for 2050 it is necessary to implement the majority of renewable energy mechanisms available, as well as demand management and energy efficiency, almost regardless of cost.

Q14. Do you have any further comments on PB's Options Appraisal Report? Please support your response with evidence where possible.

No Answer

## Chapter 4b - Assessment of Tidal Options - Short-list of Schemes

Q15. Do you agree that the two lagoon options selected for further study represent a good basis for studying the lagoons?

Whilst representing a good basis for studying lagoons in terms of energy generation the omission of an entirely off shore lagoon limits the ability to study the environmental effects where shoreline effects can be expected to be significantly reduced.

Q16. Given the short-listing criteria, are there any proposals on the short-list which are not suitable? Please support your response with evidence where appropriate.

It is difficult to see how any of the barrage options can meet the various wildlife and habitat directives and designations. Evidence for this is too extensive to provide here but will, we expect, be adequately supplied in many other submissions.

Q17. Does the shortlist represent an appropriate level of ambition given the energy potential of the Estuary?

No it does not, except for the Cardiff Weston barrage all other short listed schemes under exploit the potential power generation capacity of the estuary. The list is constrained by the need for confidence in estimation of yield and costs in a way that is strongly biased towards established technology. Other high yield, and potentially lower environmental impact schemes, like the fence and reef are excluded from the list at this point but are in our opinion worthy of the same in depth investigation as the barrage options. This opportunity for in depth study of the impact of the proposed schemes should be extended to cover all the high yield proposals and not just those based on 'old' technology.

Q18. Are there any other projects that, in your view, should be short-listed? Please provide appropriate evidence wherever possible and refer to the short-listing criteria.

Yes, the tidal fence and tidal reef schemes along with off shore lagoons and new shallow water tidal flow schemes should all be included in the detailed studies.

## **Chapter 5 - Strategic Environmental Assessment**

Q19. Which plans, programmes or environmental protection objectives are most significant for this strategic-level environmental assessment?

No Answer

Q20. Is there any additional information that could help supplement the baseline data? Any further information relating to the baseline indicators, existing problems and trends over time would be very useful.

When comparing the habitat loss due to barrage or lagoon development as against that expected from climate change related sea level rise it is important to consider the speed of change and the ability of effected species to adapt behavior. Climate change related habitat loss will be substantial but occur gradually over tens or hundreds of years. That occurring from the development of structures within the estuary will occur almost immediately the scheme becomes operational.

Q21. Is there any important information that has not been addressed in view of the SEA scope? Efforts should be made to identify specific compensatory habitat rather than just attributing a cost for land acquisition. The tidal wetland habitat in question is rare and not easily replaced and it is difficult to see where sufficient equivalent compensatory space could be found.

Q22. Is the range of environmental problems, issues and receptors covered appropriate? Is the level of receptor sensitivity appropriate?

No Answer

Q23. Is the methodology proposed appropriate for this strategic-level environmental assessment?

No Answer

Q24. Are there any major plans or projects that should be included in the assessment of cumulative effects?

No Answer

Q25. Are there any changes that should be made to the proposed SEA objectives; including any consolidation of the objectives? Are there any other SEA objectives, assessment criteria or indicators that should be included?

No Answer

Q26. Are the relevant aspects of sustainable development covered, if the SEA addresses the issues identified in this SEA Scoping Report?

No Answer

Q27. Any further suggestions regarding the scope of the SEA and its proposed assessment of the shortlisted options?

No Answer

## **Chapter 6 - Next Steps**

Q28. Do you agree with the work plan, as outlined above? If not please specify any other areas to be studied?

Additional study should be made of how to combine the individual studies if multiple schemes are implemented. In order to exploit the potential of the estuary for renewable power it seems likely that should Cardiff-Weston barrage not be the preferred option then multiple other schemes will be implemented in combination.

## **About You**

Q1. Name

Cllr Dave Cockcroft

Q2. Location

South West

Q3a. Organisation

Stroud Town Council

Q3b. I am responding on behalf of my organisation

Yes

Q3c. Sector

Local Authority

## **Uploaded responses**

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