Suggestion for combining tidal power and wind energy

Following my email of 29 April, which was a spur of the moment response to the article in the PE magazine, I have given more thought to the subject and have worked out in a more practical manner how a back-up reservoir combined with wind energy could be applied to your tidal power project.

I attach a rather primitive sketch of a suggested arrangement of the components.

I once read an article that a feasible way of storing wind energy is to pump water for storage at a high level and to recover the energy when required via a turbine system.

As your tidal wave project already makes use of such turbines it seems logical to combine the two systems.

By adding a back-up reservoir and a few penstocks you can provide a supply of pressurised water to your turbines during the 'holding periods' between high and low tide, resulting in continuous power generation 24 hours a day.

I have also based the proposal on a one way flow through the turbine.

Unfortunately I am not in a position to evaluate costs and maybe these would exceed any benefits. In which case please disregard this suggestion.

Ian Ross

2014-04-30 15:09 GMT+02:00 Swansea Tidal
<SwanseaTidal@infrastructure.gsi.gov.uk>:

Dear Mr Ross,

Thank you for your email in respect of the above project.

I am not sure whether your question was directed for the developer of the
project, Tidal Lagoon Swansea Bay plc, or for the Examining Authority (ExA).

However, we will keep your comments on file and make your name available to the ExA who would be able to exercise discretion to consider views and evidence from those who did not register a relevant representation on time by 11 April 2014 at 11:59 pm. This does not mean that you would be regarded as an ‘interested party’ for the purposes of the examination though. To view the relevant representations submitted for Tidal Lagoon Swansea Bay, please see the attached link: http://infrastructure.planningportal.gov.uk/projects/wales/tidal-lagoon-swansea-bay/?ipcsection=relreps

The Planning Inspectorate has published a series of advice notes that are intended to inform developers, consultees, the public and others about a range of process matters in relation to the examination of the application. Please find attached a link to Advice Note 8.5 which you might find useful if you wish to be involved in the examination process: http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/04/Advice-note-8-5v3.pdf

If you have any other queries, please do not hesitate to contact me.

Kind Regards

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Web: www.planningportal.gov.uk/infrastructure (Planning Inspectorate's National Infrastructure Planning portal)
This communication does not constitute legal advice.
Please view our Information Charter before sending information to the Planning Inspectorate.

From: Ian Ross [mailto:]
Sent: 29 April 2014 13:53
To: Swansea Tidal
With great interest I read the article 'Going with flow' in the PE magazine (jan 2014) and would like to ask the following question:

As the power generation is not available for 'a couple of hours, each way' why not construct a second smaller lagoon at a higher level that can be filled by wind energy (also variable availability) to drive the turbines during this dormant period?

This would apparently solve two problems at the same time.

Yours sincerely, Ian Ross (CEng MIMechE)
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PROPOSED COMBINATION OF TIDAL & WIND POWER

IAN ROSS 3/5/2014
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