

Open water wave energy conversion: riding the waves in a tough climate

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Abstract:

Wave energy conversion has been of interest to both academia and industry for many years and has seen renewed interest in the last years due to factors such as increasing awareness of global warming, high energy prices and concern over energy security. Other marine renewables such as offshore wind and ocean current energy converters are far more developed than wave energy converters, however it has been recognised that there is a huge potential for wave energy to become a fully mature energy resource - worldwide, the practically obtainable magnitude of this resource has been estimated at between 2,000 and 4,000 TWh/year. In the seminar, we will review the wave energy resource, both internationally and national, background on the technology, such as incentives and barriers, review the different topologies that have been proposed, and discuss the currently most prevalent questions and areas where further research is needed so that the wave energy potential can be better exploited.