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The wave and tidal resource of Scotland

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As the marine renewable energy industry evolves, in parallel with an increase in the quantity of available data and improvements in validated numerical simulations, it is occasionally appropriate to re-assess the wave and tidal resource of a region. This is particularly true for Scotland - a leading nation that the international community monitors for developments in the marine renewable energy industry, and which has witnessed much progress in the sector over the last decade. With 7 leased wave and 17 leased tidal sites, Scotland is well poised to generate significant levels of electricity from its abundant natural marine resources. In this review of Scotland's wave and tidal resource, I present the theoretical and technical resource, and provide an overview of commercial progress. I also discuss issues that affect future development of the marine energy seascape in Scotland, applicable to other regions of the world, including the potential for developing lower energy sites, and grid connectivity.