

# Projects

## Wave and Tidal Power Assessment



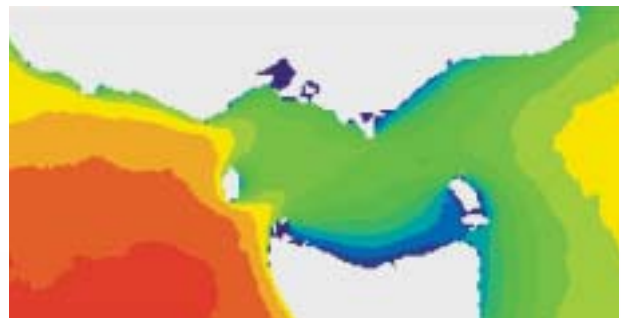
### Client: Sustainable Energy Authority of Victoria

Ocean waves represent a considerable renewable energy resource. They travel great distances without significant losses and act as an efficient energy transport mechanism across thousands of kilometres. Waves generated in the Southern Ocean arrive at the southern coast of Australia without significant loss of energy. The highest concentrations of wave power can be found in the areas of the strongest winds, i.e. between latitudes 40 deg. and 60 deg. in both the northern and southern hemispheres. This means that locations such as the southern coast of Australia are highly favoured for the extraction of wave power.



Tidal power represents another sustainable renewable energy source. The potential for tidal power generation depends upon the tidal range, and the tidal current velocity. High flow velocities are generally associated with restricted entrances to large tidal embayments.

The Sustainable Energy Authority wishes to meet the sustainable energy challenge and bridge the emerging



gap between the growing need for energy and what is available from sustainable sources. In partnership with the authority, Water Technology undertook extensive and detailed hydrodynamic and wave modelling to identify areas along the Victorian coastline where environmental conditions are sufficient to economically support wave and/or tidal power generation. This included wave and tidal modelling of Bass Strait, and tidal modelling of some of the major embayments along the Victorian coast, including Port Phillip, Western Port and Corner Inlet.

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#### Services Provided

- Hydrodynamic modelling
- Wave modelling
- Tidal power assessment
- Wave power assessment