



FACT SHEET

Wave energy

What is wave energy?

As wind blows across the ocean it creates waves. Wave motion in deep water is up-and-down; near the shore, a surge of wave results. The energy contained in oscillating wave motion can be extracted in several ways. Undersea turbines are driven by surge currents, breaking waves are funneled into a confined space to drive air turbines, and jointed structures floating on waves drive generators through the movement of their joints.

Challenge

The amount of power which can be generated from waves depends on their height and period. Coastal regions require careful assessment for their suitability for wave energy, both to understand the strength and variability of waves, and to avoid navigation hazards and negative changes in beautiful and precious environments.

Source: CSIRO CarbonKids Curriculum Unit, Sustainable Energy for All, pages 25-32

Acknowledgements

The Future Sparks educational materials project is being undertaken by CSIRO Education for Green Cross Australia.

These educational resources are designed to introduce teachers and students to Australia's use of 'clean energy' as one of the carbon dioxide mitigation options available for achieving significant reductions in atmospheric carbon dioxide emissions. Whilst not an exhaustive educational resource, it is intended to raise the awareness of

school-aged students about our changing climate, clean energy practices and applications and the other alternative energy technologies that reduce greenhouse gas emissions.

Information contained in this educational resource may be copied or reproduced for the study, research, information or education purposes in the Future Sparks program, provided that an acknowledgement of this educational resource is included.

The materials in this educational resource have been developed by Angela Colliver from CSIRO Education.

The views and opinions expressed in materials created by parties other than CSIRO and included in this educational resource do not necessarily reflect those of CSIRO.

For more CSIRO school resources visit csiro.au/carbonkids