

THE SWITCH REPORT

A Rough Comparison Of Relative Costs Of Wind, Solar & Wave Power

Assumptions:

- Capacity factors have been calculated where the figures are available, or based on cited figures for the technology.
- All projects have a 20 year life span.
- These figures are based purely on capital cost, and don't include maintenance or financing costs.
- These figures do not represent levelised cost of energy.

Energy Source	Project	Rated Capacity (MW)	Total Cost (\$m)	Capital Cost per Watt	Capacity Factor	Production Over 20 Years (GWh)	Capital Cost per MWh
Waves	Victorian Wave Project (OPT) ¹	19.0	\$233.0	\$12.26	40%	1,331.5	\$ 174.99
Waves	Perth Wave Energy Project (Carnegie) ²	0.72	\$32.0	\$53.33	40%	50.46	\$ 634.20
Waves	Oceanlinx ¹	1.0	\$8.0	\$8.02	40%	70.1	\$ 114.41
Sun	AGL Solar Project	155.0	\$440.0	\$2.84	20%	5,431.2	\$ 81.01
Wind	Portland Wind Project	155.0	\$361.0	\$2.33	35%	9,504.6	\$ 37.98

1. These projects did not proceed, but the costings are as accurate (or inaccurate) as those of the other projects.
2. It isn't apparent why the Perth Wave Energy Project has such a high cost relative to the other wave power projects. It may include the onshore generators and desalination plant being amortised over a small generation capacity.

Sources:

Victorian Wave Project: <http://arena.gov.au/project/victorian-wave-partners-wave-power-station/>

Perth Wave Energy Project: <http://arena.gov.au/project/perth-wave-energy-project/>

Oceanlinx: <http://arena.gov.au/project/oceanlinx-1mw-commercial-wave-energy-demonstrator/>

AGL Solar Project: <http://arena.gov.au/project/agl-solar-project/>

Portland Wind Project: <http://www.cleanenergyfinancecorp.com.au/our-investments/case-studies/pacific-hydros-portland-wind-energy-project.aspx>