

There's power in wind: national snapshot

Wind offers many benefits as a clean, renewable energy source. As well as being the most cost-effective renewable energy resource in Australia, it is pollution free and does not require any water to generate electricity.

A single wind turbine can produce enough energy to supply up to 2,000 average households each year and save around 1 tonne of greenhouse gas for every megawatt-hour (MWh) produced¹.

Wind energy also provides opportunities for employment and regional development, stimulating local services and offering further opportunities for investment and new skills. Since 2000, more than 1400 direct jobs and \$3.3 billion of investment has been generated through the development of wind energy in Australia².

The Australian wind energy industry has experienced significant growth over the past decade, with total installed capacity of wind farms increasing by an average of around 30 per cent per annum³.

Wind energy in Australia accounts for about 2.7 per cent of Australia's total energy consumption⁴, producing roughly 5770 Gigawatt-hour (GWh) of energy per annum⁵. This is small compared to countries like Spain, where wind contributed 16.6 per cent of total consumption in 2010.⁶

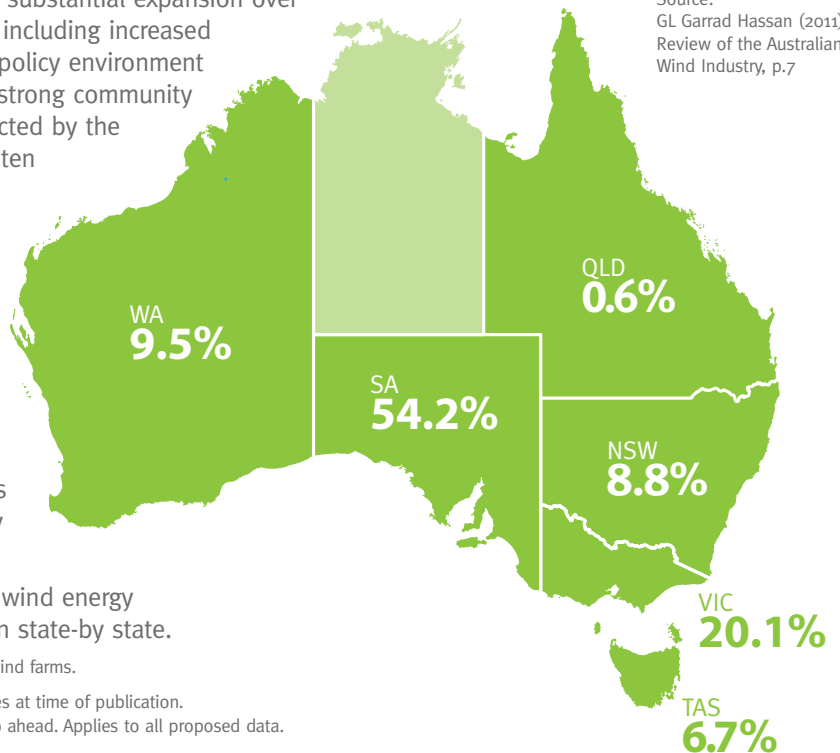
However, the Australian industry is well placed for substantial expansion over the next decade. This is due to a range of factors including increased competition in the local turbine supply market, a policy environment that supports improved investment certainty and strong community support for clean energy⁷. Three Newspolls conducted by the Clean Energy Council show that nine out of every ten Australians would like more renewable energy⁸. In NSW, 85 per cent of residents supported wind farms; and 80 per cent of local residents with wind farms in their local community supported wind farms⁹.

If all the wind farms currently proposed* were to go ahead, the wind industry would generate an additional \$15 billion worth of investment across Australia and create nearly 10,000 direct jobs. It would also mean around 5.5 million households across Australia could be powered by wind energy by the end of the decade.

The following information provides a snapshot of wind energy development in Australia, both nationally and then state-by state.

Note: The Northern Territory and the ACT do not have any large scale wind farms.

* Only includes wind farms under consideration by planning authorities at time of publication. Does not make any assumption about how many wind farms will go ahead. Applies to all proposed data.



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Wind energy in Australia: National

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Current

Number of operating wind farms:	54
Installed capacity:	2124 MW
Number of operating turbines:	1153
Number of equivalent homes powered ¹⁰ :	891,003
Total capital investment ¹¹ :	\$5.609 billion
Investment in Australia ¹² :	\$3.365 billion
Number of direct jobs created ¹³ :	1487
Number of indirect jobs ¹⁴ :	4460
Amount of carbon pollution avoided:	6,326,122 tonnes

Proposed*

Number of wind farms:	90
Installed capacity:	13099 MW
Number of proposed turbines:	5891
Number of equivalent homes powered:	5,494,938
Capital investment:	\$25.577 billion
Investment in Australia:	\$15.346 billion
Number of direct jobs created:	9169

* Only includes wind farms under consideration by planning authorities at time of publication. Does not make any assumption about how many will farms will go ahead. Applies to all proposed data.



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Wind energy in Australia: South Australia

There's power in wind: national snapshot

Current

Number of wind farms:	15
Installed capacity:	1151 MW
Number of operating turbines:	535
Percentage of installed capacity in Australia:	54%
Percentage of wind turbines in Australia:	46%
Number of equivalent homes powered:	482,836
Total capital investment:	\$2.792 billion
Investment in Australia:	\$1.675 billion
Number of direct jobs:	806
Number of indirect jobs:	2417
Amount of carbon pollution avoided:	3,428,138 tonnes

Proposed

Number of wind farms:	14
Installed capacity:	1354 MW
Number of proposed turbines:	648
Number of equivalent homes powered:	567,993
Capital investment:	\$3.078 billion
Investment in Australia:	\$1.847 billion
Number of direct jobs created:	948



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Wind energy in Australia: Western Australia

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Current

Number of wind farms:	15
Installed capacity:	204 MW
Number of operating turbines:	145
Percentage of installed capacity in Australia:	10%
Percentage of wind turbines in Australia:	13%
Number of equivalent homes powered:	85,577
Total capital investment:	\$923 million
Investment in Australia:	\$554 million
Number of direct jobs:	143
Number of indirect jobs:	428
Amount of carbon pollution avoided:	607,594 tonnes

Proposed

Number of wind farms:	9
Installed capacity:	1037 MW
Number of proposed turbines:	505
Number of equivalent homes powered:	435,014
Capital investment:	\$2.537 billion
Investment in Australia:	\$1.522 billion
Number of direct jobs created:	726

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Wind energy in Australia: New South Wales

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Current

Number of wind farms:	7
Installed capacity:	187 MW
Number of operating turbines:	116
Percentage of installed capacity in Australia:	9%
Percentage of wind turbines in Australia:	10%
Number of equivalent homes powered:	78,445
Total capital investment:	\$467 million
Investment in Australia:	\$280 million
Number of direct jobs created:	131
Number of indirect jobs:	393
Amount of carbon pollution avoided:	556,961 tonnes

Proposed

Number of wind farms:	29
Installed capacity:	5646 MW
Number of proposed turbines:	2554
Number of equivalent homes powered:	2,368,457
Capital investment:	\$10.456 billion
Investment in Australia:	\$6.274 billion
Number of direct jobs created:	3952



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Wind energy in Australia: Victoria

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Current

Number of wind farms:	9
Installed capacity:	428 MW
Number of operating turbines:	267
Percentage of installed capacity in Australia:	20%
Percentage of wind turbines in Australia:	23%
Number of equivalent homes powered:	179,543
Total capital investment:	\$983 million
Investment in Australia:	\$590 million
Number of direct jobs created:	300
Number of indirect jobs:	899
Amount of carbon pollution avoided:	1,274,755 tonnes

Proposed

Number of wind farms:	33
Installed capacity:	4111 MW
Number of proposed turbines:	1766
Number of equivalent homes powered:	1,724,536
Capital investment:	\$7.141 billion
Investment in Australia:	\$4.285 billion
Number of direct jobs created:	2878



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Wind energy in Australia: Tasmania

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Current

Number of wind farms:	6
Installed capacity:	142 MW
Number of operating turbines:	68
Percentage of installed capacity in Australia:	7%
Percentage of wind turbines in Australia:	6%
Number of equivalent homes powered:	59,568
Total capital investment:	\$424 million
Investment in Australia:	\$254 million
Number of direct jobs created:	99
Number of indirect jobs:	298
Amount of carbon pollution avoided:	422,933 tonnes

Proposed

Number of wind farms:	2
Installed capacity:	329 MW
Number of proposed turbines:	148
Number of equivalent homes powered:	138,013
Capital investment:	\$385 million
Investment in Australia:	\$231 million
Number of direct jobs created:	230



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Wind energy in Australia: Queensland

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Current

Number of wind farms:	2
Installed capacity:	12 MW
Number of operating turbines:	22
Percentage of installed capacity in Australia:	1%
Percentage of wind turbines in Australia:	2%
Number of equivalent homes powered:	5034
Total capital investment:	\$20 million
Investment in Australia:	\$12 million
Number of direct jobs created:	8
Number of indirect jobs:	25
Amount of carbon pollution avoided:	35,741 tonnes

Proposed

Number of wind farms:	3
Installed capacity:	622 MW
Number of proposed turbines:	270
Number of equivalent homes powered:	260,925
Capital investment:	\$1.980 billion
Investment in Australia:	\$1.188 billion
Number of direct jobs created:	435



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About the Clean Energy Council

References

The Clean Energy Council is the peak body of renewable energy companies in Australia. We are passionate about the value of clean energy to communities and the power of wind to cut pollution.

For more information please visit cleanenergycouncil.org.au

- 1 Sustainability Victoria (2007) Wind energy myths and facts, p.2
http://www.futureenergy.com.au/downloads/Sustainability_Victoria_Myths_Facts_about_Wind_Farms.pdf
- 2 GL Garrad Hassan (2011) Review of the Australian Wind Industry, p.4
- 3 ibid, p.4
- 4 Electricity Supply Association (2011) Electricity Gas Australia (National electricity and gas report captures trends: esaa, Media release 29 June 2011) http://www.esaa.com.au/content/detail/ega_2011
- 5 GL Garrad Hassan (2011) Review of the Australia Wind Industry, p.6
- 6 Global Wind Energy Council (2010) Global Wind Report p.15
http://www.gwec.net/fileadmin/images/Publications/GWEC_annual_market_update_2010_-_2nd_edition_April_2011.pdf
- 7 ibid, p.1
- 8 Newspoll July 2009; December 2009; May 2010;
<https://www.cleanenergycouncil.org.au/cec/resourcecentre/newspoll.html>
- 9 AMR Interactive (2010) Community Attitudes to Wind Farms in NSW
http://www.environment.nsw.gov.au/resources/climatechange/10947WindFarms_Final.pdf
- 10 Based on average household electricity consumption of 7.1MWh per annum. (Source: Energy Supply Association of Australia, 2007)
https://www.esaa.com.au/product/detail/electricity_gas_australia_2007
- 11 Total capital investment is calculated from operating wind farms and a percentage of the value of wind farms under construction
- 12 Assumes 60% invested in Australia (Source: GL Garrad Hassan, 2011)
- 13 Assumes 0.7 local jobs per MW (Source: GL Garrad Hassan, 2011)
- 14 Uses a multiplier of 3 (one FTE creates 2 indirect jobs) (Source: GL Garrad Hassan, 2011).



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