



RENEWABLE ENERGY (REQ)

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Overview

Unit: USD thousands

	2011	2012	2013 (estimated)	2014 (estimated)
Total Market Size	115300	118750	125743	131237
Total Local Production	27300	28100	29580	30170
Total Exports	3000	3050	3232	3297
Total Imports	91000	93700	99395	104364
Imports from the U.S.	13700	14050	14790	15529
Exchange Rate: 1 A\$	1.00	1.00	1.00	1.00

Total Market Size = (Total Local Production + Total Imports) – (Total Exports)

Data Sources:

Total Local Production: Industry estimates.

Total Exports: Industry estimates.

Total Imports: Industry estimates.

Imports from U.S.: Industry estimates.

Power generation is a large sector in Australia with around US\$90 billion invested in generation, transmission, and distribution assets. Annual generation is approximately 270,000 gigawatt hours. Coal-fired and gas-fired generators account for 78 percent and 12 percent, respectively, of generated electricity. 9.6 percent of electricity is sourced from renewable sources.

Australia's renewable energy production is driven by hydroelectricity (6.4 percent) and wind (2.1 percent). Biomass, biogas, and solar account for about one percent of electricity generation. Most solar energy is used for residential water heating and accounts for 1.5 percent of residential energy consumption.

One of the key barriers to the development of the renewable energy industry has been the low cost of non-renewable energy such as coal or gas-fired generation. This barrier could be eroded by the introduction of a fixed price carbon tax of \$23 a ton which went into effect in July 2012. By 2015, the carbon pricing scheme will transition to an emissions trading scheme with the price of permits set by the market.

The Government has established the Clean Energy Finance Corporation which will manage a \$10 billion fund to finance and supporting emerging technologies. The Australian Renewable Energy Agency has also been set up to manage a range of grant programs for new technology. It made its first key decision under the Solar Flagship Program to award a major grant towards Australia's first large scale solar PV project.

The Australian Government has set a target to reduce greenhouse gas emissions by five percent on 2000 levels by 2050. The Government is also committed to ensuring that 20 percent of Australia's electricity supply will come from renewable energy sources by 2020. These policies, together with the introduction of a carbon tax, are coming at a time when a number of states are facing potential energy shortfalls due to aging infrastructure.

Wind powered energy is one of the most rapidly growing areas of renewable energy in Australia. Foreign manufacturers of wind turbine equipment, primarily from Germany and Denmark, have set up representative offices, and in-country manufacturing facilities.

Australia also uses a range of biomass technologies, the most common, is bagasse-generated energy used for the sugar industry and the national grid. Bio-fuels are another area of growth and a number of groups are working on several initiatives including large-scale bio-diesel and ethanol manufacturing. U.S. companies are making inroads into this area.

The Australian climate and location is ideally suited to solar power. Australia has become a world leader in photovoltaic (PV) technology. Cumulative installed PV electric power is around 52MW with 90 percent being off-grid. European and U.S. participation in PV cells is low. Asian suppliers dominate the PV cell import market.

Sub-Sector Best Prospects

- Suppliers to solar cell manufacturers.
- Solar energy equipment, particularly for isolated communities.
- Small-scale (<200kW) to large-scale (>2MW) wind turbines.
- Energy storage technology for intermittent generation.
- Geothermal generation technology for low temperature sources.
- Biomass generating technology.

Opportunities

Current renewable projects include:

Project Type	Project Name	Company	Value US\$
Wind	Macarthur	AGL	900 million
Wind	Collgar	UBS	750 million
Wind	Musselroe	Hydro Tasmania	400 million
Bioenergy	Victoria 2	Sucrogen	NA
Landfill Gas	Woodlawn Bioreactor	Veolia	NA
Solar PV	Carnarvon	EMC Solar	NA

Resources

Australian Bureau of Agriculture and Resource Economics: <http://www.daff.gov.au/abares>

Clean Energy Council: <http://www.cleanenergycouncil.org.au>

Department of Climate Change and Energy Efficiency: <http://www.climatechange.gov.au/>

Smart Grid Australia: <http://www.smartgridaustralia.com.au/>

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