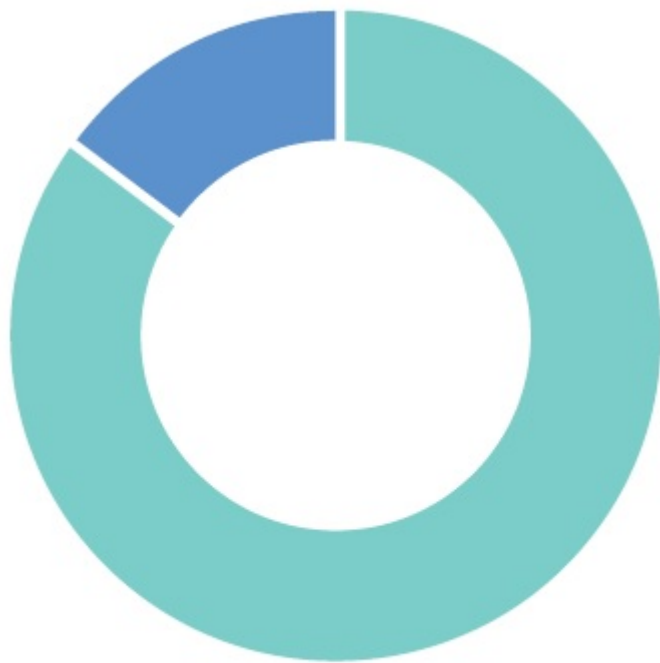


RENEWABLE ENERGY IN AUSTRALIA

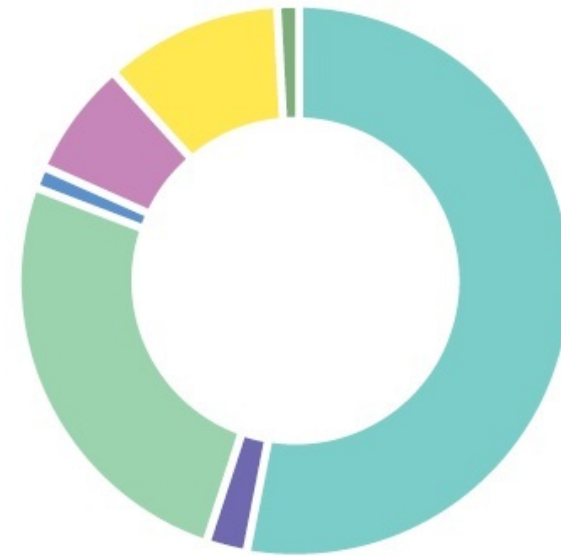
June 19th 2014



RENEWABLES IN AUSTRALIA - 2013



● Renewables **14.76%**
● Fossil Fuels **85.24%**



● Hydro **55%**
● Wind **27%**
● Solar PV **11%**
● Bioenergy **7%**
● Solar Thermal **0.079%**
● Marine **0.001%**
● Geothermal **0.001%**

AUSTRALIAN OVERVIEW

- Key energy market drivers:
 - Falling energy demand
 - Increased carbon constraints and aging coal power fleet
 - Political focus on retail electricity prices
 - Rising gas prices
- Australia has massive renewable energy opportunity underpinned by:
 - World leading resources
 - Investment grade policy support
- Clean energy market is maturing as it drives toward at least 20% Renewable Energy Target by 2020.

SOLAR PV

- Australia was ranked sixth in terms of PV per inhabitant and installed its 1 millionth PV rooftop in 2013
- One system every 2 minutes 39 seconds in 2013
- Cost per MWh of rooftop solar power in Australia puts payback in order of 7-10 years
- Australia added 0.8 GW in 2013, for a total of nearly 3.3 GW
- Community-owned PV projects are also emerging in Australia
- Sizeable CPV projects exist in Australia

WIND

- Australia was the only country in the Pacific to add wind capacity (+0.7 GW, total 3.2 GW).
- Number of large projects commissioned in 2013, including Australia's largest.
- In Australia the interest in community-owned wind power projects is growing
- In Australia and New Zealand wind generated power is nearing cost competitive with new coal/gas-fired plants.

GEOHERMAL

- Australia and New Zealand (241MW – net additions: 196MW) added new capacity
- New Zealand was number 6 for electric generating capacity (0.9GW, 30% increase)
- The 82MW Ngatamariki geothermal power station in New Zealand, world's largest binary installation, was opened in 2013.
- Among notable industry advances in 2013 was Australia's first EGS facility, one of only a handful of such projects in the world.

SOLAR THERMAL HEATING & COOLING

- Australia has a notable market for unglazed water collectors and its capacity represents 1.8% of global capacity.
- Australia added an estimated 0.6 GW (71% unglazed), for a total of 5.1 GW (51% unglazed)
- In Australia, interest in solar cooling systems esp. in the residential sector is increasing as is the use of solar cooling.

INVESTMENT

- Australia was the ninth largest investor (excluding R&D) and leading in Pacific (USD 4.4 billion) in 2013.
- New Zealand also increased investment.

MARKET OUTLOOK

- Large deployment pipeline approved and ready
- Coalition Government has reduced support for renewable energy:
 - Carbon price repeal
 - Abolish Clean Energy Finance Corporation (CEFC)
 - Reduced Australian Renewable Energy Agency (ARENA) funding
 - Review of Renewable Energy Target (RET)
- Future outlook will be determined by RET review outcome
- Consumer support for small scale systems remains strong
- Long term economics look favourable