

GEOTHERMAL ENERGY IN AUSTRALIA

A significant geothermal energy industry has emerged.

As at September 2009, there are now 48 companies pursuing geothermal energy in Australia, including 19 listed companies, with 391 geothermal tenements covering 362,000 km². The Industry has invested \$325m between 2000 and 2008 and is forecast to invest \$1,528m Australia-wide by 2012.

Every State, and the Northern Territory, has now put in place the required legislation or regulations that enable the industry to develop. Most of the activity is centered in South Australia, as indicated in the figure below.

The Australian geothermal energy industry is well organised

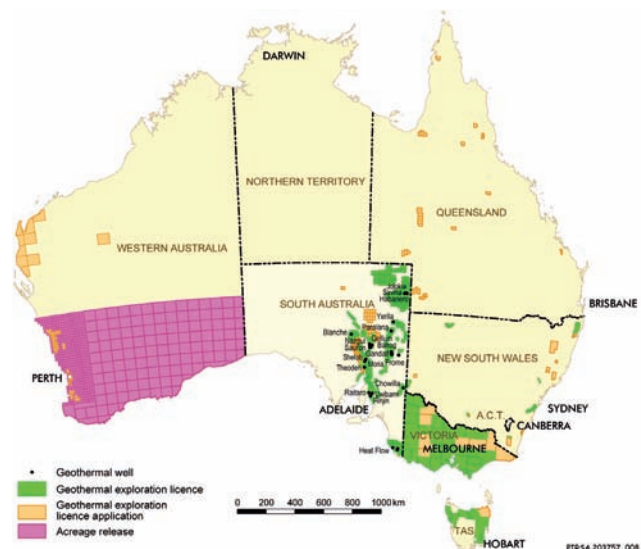
The companies working in the sector formed the Australian Geothermal Energy Association (AGEA) in 2007 to represent their particular interests. AGEA has quickly become a respected industry body. In addition to providing comment to Federal and State Governments, it has commissioned several key independent reports, all of which clearly demonstrate the value of the geothermal industry to Australia's future. For example, an assessment of the early growth potential of the industry indicated that it has the opportunity to have a generating capacity between 1,000 MW (low estimate) to 2,200 MW (high estimate) by 2020. More recently it released a report addressing the value of new transmission lines from the Cooper Basin area to the national grid at Port Augusta. Susan Jeanes, AGEA's Chief Executive, summarized the report:

"The benefits of bringing forward lower priced geothermal energy were estimated to be \$860m for South Australian customers and \$2.8bn for customers across the Australian NEM. This, according to the report, follows as a direct result of lower cost geothermal energy displacing higher cost forms of renewable energy".

Geodynamics' Managing Director, Gerry Grove-White, was the founding chairman of AGEA and the Company continues to be an active participant. The various reports and other information are available on AGEA's website at <http://www.agea.org.au/>.

The growth in activity over the last few years also led to the establishment of the Australian Geothermal Energy Group (AGEG) in 2006 as a broad association of organizations involved in the industry. It now has a membership comprising over 101 organisations (companies, government departments and agencies and academic and research institutions). AGEG is hosted by South Australia's Department of Primary Industries and Resources (PIRSA): see <http://www.pir.sa.gov.au/geothermal/ageg>. Importantly, it has established Technical Interest Groups (TIGs) designed to collaboratively pursue technical issues of common interest. Geodynamics Dean Hindle leads the TIG concerning Drilling and Well Construction and the Company is an active participant in most of the TIGs, including Reservoir Development and Engineering.

Australia is a member of the International Partnership for Geothermal Technology, along with the U.S. and Iceland. This organization was established in 2008 and is designed to facilitate international collaboration in technology development. Australia's industry representative on the IPGT Steering Committee is Geodynamics Dr Adrian Williams.



Government stewardship of geothermal exploration licences, Courtesy of PIRSA

Government policies and initiatives are favorable to the geothermal energy industry

Federal and State Governments are increasingly supportive of renewable energy, including geothermal energy. The Federal Government has announced its commitment for a Carbon Pollution Reduction Scheme (CPRS) that will see a price attached to the emission of carbon, and it has passed its Renewable Energy Target (RET) legislation that is designed to see over 20% (45,000 GWh) of Australia's electricity come from renewable sources by 2020.

The Federal Government has decided to establish a new Australian Centre for Renewable Energy (ACRE) to manage its investments into renewable energy. It will be established during the current financial year with an initial budget of \$465 million. Two important initiatives have been launched under this fund. The first was the \$50 million Geothermal Drilling Program, offering assistance of up to \$7 million per drilling project that will prove a geothermal concept and to assist companies access drilling rigs: two awards have been made while a second call for proposals has closed and is anticipated to exhaust the program with a further five awards late in 2009. The second initiative comprises the first round under the Renewable Energy Demonstration Program which is designed to support the commercial scale demonstration of renewable technologies. Geodynamics has submitted a proposal to this program seeking \$90 million to assist its first commercial scale demonstration project in the Cooper Basin, with a decision by the Government anticipated late in 2009.

The Federal Government has also worked with the Geothermal Industry to develop a Geothermal Industry Development Framework and a Technology Roadmap. These strategic documents provide a framework to assist both governments and the industry to develop as quickly and as efficiently as possible.

The Ministerial Council on Energy (MCE) has initiated a review to be undertaken by the Australian Energy Markets Commission (AEMC) into the capacity of existing electricity market mechanisms to cope with the expanded RET and proposed introduction of the CPRS.

State Governments have also been active, with four Geothermal Centres being established with universities in Queensland, Victoria, South Australia, and Western Australia. CSIRO has also increased its commitment to geothermal technology as part of its new energy research portfolio.

Federal White paper is looking at energy policy out to 2030

The Federal Government is preparing a White Paper to guide its energy policy out to 2030. Discussion papers have been released and responses submitted to the government. The final paper is expected to be released late in 2009.

For more information go to http://www.ret.gov.au/energy/Documents/facts%20statistics%20publications/Terms_of_Reference_Energy_White_paper.pdf.

Annual Conference brings the Geothermal Industry together

A highlight of the geothermal year is the annual conference that is sponsored by both AGEA and AGEG. The 2009 conference will be in Brisbane on 10-13 November, with an anticipated attendance of over 350 from across the Australian and international geothermal industry. Geodynamics is a strong participant with two papers and a company update. For more information go to <http://www.impactenviro.com.au/ausgeothermal/>.

Australia has the world's first Geothermal Reporting Code

The Geothermal Code Committee, under the sponsorship of AGEG and AGEA, has developed the Australian Geothermal Reporting Code (2008). The Code is designed to promote transparency and consistency in the way companies report their exploration results and estimates of resources and reserves. The Geothermal Code aligns with the JORC Code that operates successfully in the mining industry, with a framework shown in the figure below. The Code is available via the AGEG or AGEA websites. The first year has succeeded in ensuring the quality of public reports and a second edition is due for release in November 2009. All AGEA member companies are required to comply with this Code.

The framework of the Australian Geothermal Reporting Code (extracted from the Geothermal Code, 2008)

