

Title

## Australia's Geothermal Energy Rush

Date 4<sup>th</sup> June 2009

Release HM-00609/01

Author Activated Logic Editorial Team

Location Melbourne

Sector Energy / Renewables / Geothermal

Key-words Australian Geothermal Index<sup>TM</sup>  
Geothermal Reporting Code (2008 edition)  
Geothermal resource  
Hot-rock energy

Key-stats In excess of 2,000,000PJ of geothermal energy resources have been identified by 7 companies in Australia since August 2008. The recently discovered geothermal resources are potentially sufficient to provide the equivalent of all of Australia's residential energy requirements for a thousand years. The listed component of Australian geothermal sector is currently valued at approximately \$450 million, down from \$650 million a year ago. Australian Geothermal Index at 61pts, down 39% since the 1<sup>st</sup> of July 2008.

Contact Ms. Naomi Keogh  
+61(07) 5561 7282



**Ms. Naomi Keogh**  
M.Arts(Writing), AMAMI, MAICD  
Communications Director

# Australia's Geothermal Energy Rush

MELBOURNE, AUSTRALIA. In the face of the current economic downturn, the Australian geothermal industry has experienced significant growth in the number of companies that have joined the search for "Hot-Rock Energy", fuelled by the rapidly increasing demand for renewable energy. In the nine months since the Australian geothermal industry launched the world's first Geothermal Reporting Code, six companies have reported massive geothermal energy reserves. In addition, earlier this week, the South Australian gold explorer Southern Gold (ASX: SAU) added to the tally with a significant resource at its Torrens Geothermal Project in South Australia, and Hot Rock Limited (ASX: HRL) is expected to release its maiden resource in coming months.

In the May 2009 federal budget, the government announced a \$4.5 billion Clean Energy Initiative which involves investing heavily into renewable energy sources with the objective of reducing carbon emissions. Putting the politics of an emissions trading scheme aside, Australia remains the world's biggest carbon polluter on a per capita basis, contributing almost 1.5% of the world's total carbon emissions.

Geothermal energy is considered an ideal renewable energy, for its potentially attractive production costs over other renewable sources and because it is the only major renewable energy source that is capable of providing baseload power – that is non-stop power, 24 hours a day, rain, hail or shine.

Recently, Resource Minister Martin Ferguson told Reuters:

"Geothermal energy which is sometimes known as hot rocks has got a huge potential for Australia, both as a solution to climate change and in terms of national energy security."

Huge potential maybe, but how much energy are these hot rock explorers targeting? Well, according to Geoscience Australia's Anthony Budd, "One percent of reserves would produce 26,000 years of energy supplies". The actual Geoscience Australia report by Budd, Holgate, Gerner & Ayling goes on to say, "future drilling and extraction technologies will undoubtedly allow extraction of heat at depths greater than 5 km, meaning that the above figure is conservative".

Although there are about 50 geothermal exploration licence holders across Australia which have collectively committed to spending in excess of \$1 billion on geothermal exploration and development, only 8 companies have declared geothermal resources since the launch of the Geothermal Code in August last year.

The reporting of geothermal resources in Australia needs to be compliant with the Australian Code for Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2008 Edition), which outlines the methods for geothermal energy classification. The broadest category of energy is referred to as inferred resource, and the classifications of indicated, measured, probable and proven are used in cases of increasing geological and economic certainty.

## Australian Geothermal Resources

ASX Code	Company	Project	Geothermal Resource* (PJ)	Category*
GDY	Geodynamics Ltd	Innamincka & Hunter Valley	244,680	various
GER	Greenearth Energy Ltd	Geelong & Gippsland	263,600	inferred
GRK	Green Rock Energy	Olympic Dam Region	120,000	inferred
PAX	Panax Geothermal Ltd	Limestone Coast	332,000	various
PTR	Petratherm Ltd	Paralana	230,000	inferred
TEY	Torrens Energy	Parachilna	780,000	inferred
SAU	Southern Gold Ltd	Torrens Geothermal Project	TBA - 1st week June '09	inferred
HRL	Hot Rock Ltd	Penola Trough	Undisclosed	various

\* Resource Figures are Indicative Only. More information about Geothermal Resource categories can be obtained from:  
[http://www.pir.sa.gov.au/geothermal/ageg/geothermal\\_reporting\\_code](http://www.pir.sa.gov.au/geothermal/ageg/geothermal_reporting_code)

The geothermal energy resource estimates reported by this handful of predominantly South Australia focussed companies is simply mind-blowing. Between them, they have identified in excess of 2 million Petajoules of geothermal energy. Not all the geothermal energy identified will be recoverable due to complex geology, economics and the temperatures of source rocks. Geologists put the economically recoverable proportion of the heat at 15-20%. The energy expected to be recoverable is still massive. To put it into context, 1 Petajoule of recovered thermal energy is equivalent to 172,000 barrels of oil.

The magnitude of Australia's geothermal resources is expected to increase significantly in coming months, with numerous projects progressing with drill rigs and geophysical data acquisition. Assuming only 20% of the 2 million Petajoules of discovered geothermal energy is recoverable, that equals 400,000 Petajoules - one-thousand times Australia's total projected residential energy consumption for 2009!

“In the last 9-months, a handful of Australian Geothermal companies have discovered significant geothermal resources potentially sufficient to provide all of Australia's residential energy requirements for a thousand years.”

With massive energy resources in place, it's no surprise the geothermal sector has attracted Australian energy majors including Origin Energy (ASX:ORG), AGL Energy (ASX:AGK), Stuart Petroleum (ASX:STU) and Beach Petroleum (ASX:BPT). Offshore investors include the Asian parent company of Australian electricity retailer TruEnergy (CLP Group) and India's largest power company, Tata Power.

Despite, the increasing interest in the geothermal sector the industry has not been immune to the widespread deterioration in capital markets. A benchmark used to measure the performance of the stockmarket listed geothermal companies, The Australian Geothermal Index™, has fallen 39% since the start of July last year.

**Mr. Bahay Ozcamak, Managing Director of Activated Logic is optimistic about the future of Australian geothermal energy production.**

“Earlier this year, Geodynamics successfully conducted a closed loop test at its Innamincka project in South Australia's Cooper Basin project, where 50,000 tonnes of brine was circulated between two wells that were approximately 9km apart. Cool water down one end, hot water out the other. It works.”

**Mr Ozcamak also said that despite Australian listed geothermal companies trading at significant discounts compared to 2008 valuations, there is good reason for optimism in the sector.**

“The valuations of the geothermal sector have fallen significantly in the past year, with the listed component of the geothermal sector now worth approximately \$450 million, similar to what the industry leader Geodynamics (ASX: GDY) was valued at a year ago.

However there is good reason for optimism in the sector. We are currently in discussions with a number of international energy utilities, investment firms and superannuation funds looking to use the current downturn in investment as an attractive time to enter the sector.

Only this week, Southern Gold announced a massive geothermal resource at its Torrens Geothermal Project. The Southern Gold story is interesting in that the two wells used to determine the geothermal resources of the project were initially drilled as mineral exploration holes by the company while exploring for copper, gold and uranium.

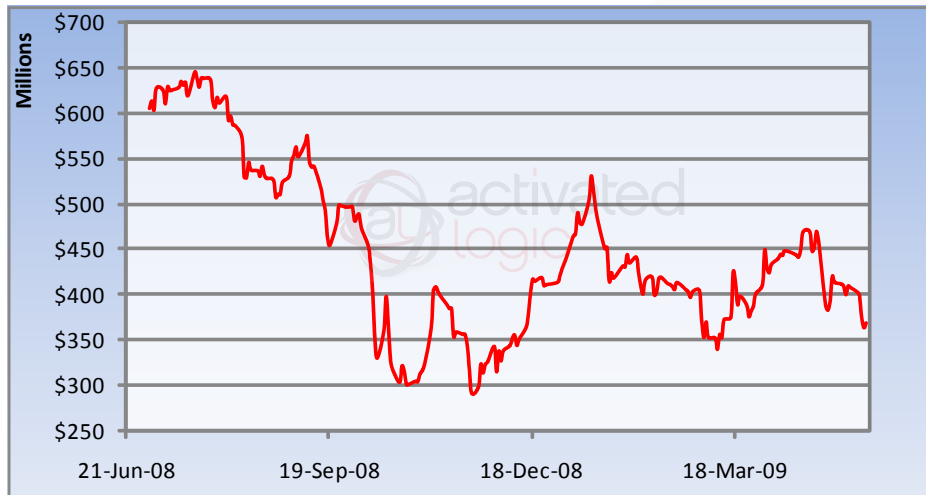
We expect Southern Gold's geothermal resources to grow further following deep drilling as this initial resource is from an exploration lease which covers only 5% of Southern Gold's geothermal assets to the southwest of Lake Torrens in South Australia. The project is located approximately 10-15km from the national power-grid linking Olympic Dam and Prominent Hill to South Australia's power infrastructure hub at Port Augusta. Proximity to major power distribution networks is essential in improving project economics.”

## About the Australian Geothermal Index™

The Australian Geothermal Index™ (AGI) is the benchmark composite index of the 10 solely geothermal focused companies listed on the Australian Securities Exchange (ASX). The AGI was based at 100 using Laspeyre's PI methodology (as was the XAO) on the 1st of July 2008 to provide an indication of the relative performance of the AGI against the XAO.

^ The Australian Geothermal Index was developed by and is owned and managed by Activated Logic Pty Limited. More information is available at [www.geothermalindex.org/agi.html](http://www.geothermalindex.org/agi.html)

## Combined Market Capitalisation of Australian Securities Exchange listed Geothermal Companies



## Additional Resources

Activated Logic

[www.activatedlogic.com](http://www.activatedlogic.com)

Australian Geothermal Energy Association

[www.agea.org.au/](http://www.agea.org.au/)

Australian Geothermal Energy Group

[www.pir.sa.gov.au/geothermal/ageg](http://www.pir.sa.gov.au/geothermal/ageg)

Australian Geothermal Index™

[www.geothermalindex.org/agi.html](http://www.geothermalindex.org/agi.html)

Australian Geothermal Industry - Technology Roadmap

[www.ret.gov.au/Pages/default.aspx](http://www.ret.gov.au/Pages/default.aspx)

Australian Geothermal Industry - Development Framework

[www.ret.gov.au/Pages/default.aspx](http://www.ret.gov.au/Pages/default.aspx)

Hot Dry Rocks Pty Ltd

[www.hotdryrocks.com](http://www.hotdryrocks.com)

Impress & Progress Index™

[www.activatedlogic.com](http://www.activatedlogic.com)

Southern Gold

[www.southerngold.com.au](http://www.southerngold.com.au)

The Future of Geothermal Energy - MIT Report

<http://geothermal.inel.gov>

## Media Interview

**Event Name:** Review of the Australian Geothermal Index™ and update on the performance of the Australian Geothermal Industry.

**Date:** 5th June 2009

**Time:** 9:00am EST

**Presenter:** Mr. Bahay Ozcakmak



**boardroom  
radio**

<http://www.brr.com.au/event/58000>

OR

<http://www.activatedlogic.com/in-the-media-boardroom-radio.html>

[activatedlogic.com](http://activatedlogic.com)

## About Activated Logic

Activated Logic offers our clients innovation in consulting and communication strategies within eight core industry sectors; Agribusiness, Bio-sustainable, Energy, Healthcare & Medical, Manufacturing, Mining Resources, Research and Technology. The experienced and professional team at Activated Logic has assisted many successful organisations throughout Australia with their corporate objectives. Our people are leaders and innovators in their fields – so it's not surprising that solving old problems with new solutions, or adapting to rapid change, is something we do naturally. We understand that we will ultimately be evaluated by how we have improved our client's communication strategies and increased their shareholder confidence. Contact Activated Logic to discover how our integrated corporate solutions can assist your organisation.

## Disclaimer & Disclosure Notice

The publisher of this publication, Activated Logic Pty Limited ABN 62 134 740 293 ("Activated Logic"), its directors, officers, staff and their associates from time to time may hold shares in the securities mentioned in this publication and as a result may benefit from any change in the price of the relevant securities. Activated Logic and its advisers may earn brokerage, fees, commissions, other benefits or advantages as a result of a transaction arising from any research or opinions mentioned in this publication and distributed to existing and future clients. Activated Logic may have provided corporate advice within the past and may continue to provide corporate advice to companies (or related parties) concerned, for which Activated Logic may have received gross fees and/or continue to receive fees.

Any advice contained in this document is unsolicited general advice and is provided for information purposes only. Do not act on this advice without first consulting your financial or investment adviser to determine whether the advice is appropriate for your specific investment objectives, financial situation and particular requirements. Activated Logic believes that any information or potential advice contained in this publication was accurate when issued, however Activated Logic does not warrant the accuracy or reliability of this information. Activated Logic, its directors, officers, staff and their associates exclude all liability whatsoever, in negligence or otherwise, for any loss or damage resulting from the use or circulation of this publication to the full extent permitted by law.

THIS PUBLICATION DOES NOT CONSTITUTE FINANCIAL ADVICE

## Media Enquiries

The Activated Logic Communications Director (CD) is the authorised spokesperson designated and intended as the main contact for companies or individuals seeking additional information about Activated Logic, Media Releases our NDA or Privacy Policy. For additional information regarding this publication or any of our policies, please contact Ms. Naomi Keogh - [naomik@activatedlogic.com](mailto:naomik@activatedlogic.com)

## Contact/Feedback

Activated Logic is committed to the principles of Total Quality Management (TQM) and various other continuous improvement systems. After reading this document in its entirety if you believe this document may be improved please contact us with your thoughts, we would like to hear from you.

**T** 1300 4 LOGIC **F** +61(0)7 5561 8984 **E** [info@activatedlogic.com](mailto:info@activatedlogic.com) **W** [www.activatedlogic.com](http://www.activatedlogic.com)

## Mailing Address

Attention - Communications Director. PO Box 889, Sanctuary Cove, Queensland 4212, Australia

© Copyright 2009. Activated Logic Pty Limited. All rights reserved.

All contents of this publication including copywriting, original images, illustrations and additional artwork are protected by Australian & International Copyright Laws, specifically by numerous provisions of the Australian COPYRIGHT ACT of 1968 and subsequent amendments and extensions as applicable. The Activated Logic Logo is an Australian Registered Trade Mark, (No. 1281315 - the Atomic Orbit Around Ltrs Device), and use of a substantially identical or deceptively similar trade mark is strictly prohibited by Australian Copyright and Trademark Laws.