

ASX ANNOUNCEMENT AND MEDIA RELEASE, 19 January 2010

GEOTHERMAL PROJECT TO PRODUCE CLEAN ENERGY AND FRESH WATER

Greenearth Energy Limited (ASX:GER) (Greenearth Energy) on 26 June 2009 announced a joint research project with Melbourne's RMIT University. The project aims to generate electricity and drinking water from geothermal sources.

Greenearth Energy is delighted to announce today the Honourable Peter Bachelor MP Minister for Energy and Resources and Community Development launched the \$1.12 million three year project at RMIT University's Bundoora Campus.

RMIT University's Professor Aliakbar Akbarzadeh is leading a team of researchers developing an innovative system that combines fresh water production with electricity generation using entirely renewable sources.

"Our research focuses on the development of a dual geothermal system that can desalinate hydrothermal waters while generating renewable power," commented Professor Akbarzadeh.

Researchers have seen promising results from a small-scale concept prototype developed at the Thermo-Fluids Laboratory in RMIT's School of Aerospace, Mechanical and Manufacturing Engineering, which was on display at today's launch.

The three-year project, funded through an Australian Research Council Linkage grant, RMIT University and Greenearth Energy, will focus on further development of the prototype, performance improvement and evaluation of the dual geothermal system.

Greenearth Energy Managing Director, Mark Miller, said "the research outcomes, if successful, would be used to develop commercial systems for a range of applications, including units capable of producing 0.1MW of electrical power and 75,000L of water per day. This scale of technology is particularly suitable for small and isolated communities off the main electricity grid.

This project could pave the way for the effective use of suitable hydrothermal waters, offering export opportunities through the commercial manufacture of small to medium-scale dual geothermal systems".

For more information please contact Greenearth Energy on (03) 9620 7299 or visit www.greenearthenergy.com.au



Mark Miller
Managing Director
Greenearth Energy Limited

19 January, 2010

Geothermal project to produce clean energy and fresh water

RMIT University researchers are developing new technology to meet two of the greatest challenges facing Australia today, through an all-in-one geothermal system that can simultaneously produce clean electricity and drinking water.

The \$1.12 million research project, conducted with industry partner Greenerth Energy, will be officially launched by Victorian Energy and Resources Minister Peter Batchelor at RMIT's Bundoora campus today.

Professor Aliakbar Akbarzadeh is leading a team of researchers developing an innovative system that combines fresh water production with electricity generation using entirely renewable sources.

"Our research focuses on the development of a dual geothermal system that can desalinate hydrothermal waters while generating renewable power," he said.

"While our dam levels may be low, Australia has billions of litres of hot salty water stored in geothermal reservoirs between two to four kilometres underground.

"With the environmental pressures facing our hot, dry continent, we need to develop systems that can effectively tap into this vast and under-utilised resource."

Researchers have seen promising results from a small-scale concept prototype developed at the Thermo-Fluids Laboratory in RMIT's School of Aerospace, Mechanical and Manufacturing Engineering, which will be on display at the launch.

The three-year project, funded through an Australian Research Council Linkage grant and Greenerth Energy, will focus on further development of the prototype, and performance improvement and evaluation of the dual geothermal system.

Greenerth Energy Managing Director, Mark Miller, said the research outcomes, if successful, would be used to develop commercial systems for a range of applications, including units capable of producing 0.1MW of electrical power and 75,000L of water per day, suitable for small and isolated communities off the main electricity grid.

"This project could pave the way for the effective use of suitable hydrothermal waters, offering export opportunities through the commercial manufacture of small to medium-scale dual geothermal systems," Mr Miller said.

Media Opportunity

What: Launch of RMIT and Greenerth Energy Dual Geothermal research project

When: 9.30am – 10.30am, Tuesday, 19 January

Where: RMIT Bundoora East cafeteria, Building 251, Level 2, Plenty Rd, Bundoora

Campus Map: <http://mams.rmit.edu.au/x6qoug78u783.pdf> (Map Ref: C14)

Contact: Liz Tsotra, liz.tsotra@rmit.edu.au or 9925 6000

For interviews: Professor Aliakbar Akbarzadeh, (03) 9925 6079 or 0409 943 394, Greenerth Energy Managing Director, Mark Miller, (03) 9620 7299.

For general media enquiries: RMIT University Communications, Gosia Kaszubska, (03) 9925 3176 or 0417 510 735.



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DUAL GEOTHERMAL SYSTEM
FOR FRESH WATER PRODUCTION
AND POWER GENERATION



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 *Harnessing the heat
beneath our feet*

DUAL GEOTHERMAL SYSTEM FOR FRESH WATER PRODUCTION AND POWER GENERATION



Professor Aliakbar Akbarzadeh and Master of Engineering student, Fulaqi Bai, next to an experimental combined desalination and power system at RMIT's School of School of Aerospace, Mechanical and Manufacturing Engineering.

Project

In Australia hot salty water with temperatures of between 90°C and 150°C exists in geothermal reservoirs at depths of between 2,000m and 4,000m. The ultimate aim of this joint project is to develop an efficient dual geothermal system that uses naturally occurring, hot saline water, from geothermal reservoirs that can simultaneously produce electrical power and fresh water.

Funded by the Australian Research Council (ARC), Greenearth Energy Ltd and RMIT University, the joint project's immediate aim is to take the research completed to date at RMIT University on a concept for a Combined Desalination and Power Generation (CDP) system and develop a laboratory scale prototype dual geothermal system unit. The project will simulate field conditions for performance analysis, validation of computer modelling and system optimisation. This research will provide valuable information for a field trial of a commercial scale prototype and subsequent potential commercialisation of the resulting technology.

The dual geothermal system for fresh water production and power generation developed in this project will, if successful, utilise relatively low-temperature geothermal fluids and assist

in supplying fresh water as well as electricity to a range of applications, including small communities remote from the main electricity grid.

The technology developed in this project has the potential to provide industry development, employment creation and export opportunities via the commercial manufacture in Australia of small to medium scale dual geothermal plants. An example would be units capable of producing up to 0.1 MW of electrical power and 75,000 L of water per day suitable for remote applications.

The dual geothermal system for fresh water production and power generation research project is a collaboration between the School of Aerospace, Mechanical and Manufacturing Engineering at RMIT University and ASX listed geothermal exploration and development company, Greenearth Energy Ltd (GER).

The success of this collaborative project has the potential to pave the way for the effective utilisation of lower temperature hydrothermal waters in Australia for both fresh water production and power generation.

DUAL GEOTHERMAL SYSTEM FOR FRESH WATER PRODUCTION AND POWER GENERATION

Water

Australia is the driest inhabited continent on earth, with the least amount of water in rivers, the lowest run-off and the smallest area of permanent wetlands of all the continents.

One third of the continent produces almost no run-off at all and Australia's rainfall and stream-flow are the most variable in the world.

Remote Power Generation

Over 85% of Australia's population reside in the country's major coastal centres. Australia's remote regions are typically used for agriculture, mining, tourism and are home to many Indigenous communities.

Many remote communities in Australia rely almost entirely on diesel fuel for power generation as a result of being too remote to be connected to the electricity grid.

Remote communities using diesel fuel for their power generation typically pay significantly higher power costs and as a by-product emit substantial greenhouses gases.

The dual geothermal system for fresh water production and power generation has the potential to deliver remote communities and other applications greater access to water resources while at the same time supplying base-load, renewable, and emission-free power generation.

Greenearth Energy Ltd.

Greenearth Energy is an Australian geothermal energy company that aims to explore for and develop geothermal resources in Australia and Indonesia.

Greenearth Energy currently holds three key strategic Geothermal Exploration Permits (GEP's) in onshore Gippsland (GEP13), the La Trobe Valley (GEP12) and the Bellarine Peninsula (GEP10), all of which are located in close proximity to major power consuming / CO2 emitting industries, communities and the national electricity transmission network.

Greenearth Energy's primary focus is on hot sedimentary aquifer systems (HSA's), which tend to be widespread in certain areas, generally exist at shallower depths (of between 2,000m and 4,000m) and can utilise proven, commercially available conventional binary power plant technology.

Greenearth Energy's flagship domestic geothermal project is the Geelong Geothermal Power Project (GGPP).

The company listed on the Australian Stock Exchange in February 2008 with the stock code of GER.

RMIT University

RMIT is one of Australia's largest tertiary institutions. As an innovative, global university of technology, with its heart in the city of Melbourne, RMIT has an international reputation for excellence in work-relevant education and high quality research, and engagement with the needs of industry and community.

The School of Aerospace, Mechanical and Manufacturing Engineering is one of the largest and progressive engineering schools in Australia. The School has an establishment of over 90 staff, covering the disciplines of Aerospace & Aviation, Mechanical & Automotive Engineering, and Manufacturing & Materials Engineering.

The Energy Conservation and Renewable Energy Group (Energy CARE) and the Renewable Energy Park are based at RMIT's Bundoora East campus. The group aims to be an internationally recognised centre of excellence in tertiary and community education, research and development, and consultancy in sustainable energy. It focuses on energy efficiency and renewable energy technologies that contribute towards ecologically sustainable development nationally and globally.

