



**QUARTERLY ACTIVITIES REPORT
FOR THE THREE MONTHS ENDED
31 DECEMBER 2009**

*Harnessing the heat
beneath our feet*

CORPORATE DIRECTORY

Directors

Simon R. Molesworth AM, QC (Chairman)
Robert J. Annells (Non-executive Director)
John T. Kopcheff (Non-executive Director)
Robert L. King (Executive Director)

Managing Director

Mark Miller (Managing Director)

Company Secretary

Vicki M. Kahanoff BBus CPA

Registered Office

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Melbourne Victoria 3000

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Securities Exchange

Australian Securities Exchange Limited
Level 45, South Tower, Rialto
525 Collins Street
Melbourne Victoria 3000
ASX code: GER

Auditors

Pitcher Partners

Bankers

Westpac Banking Corporation

Address for Correspondence

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Share Registry

Computershare Investor Services Pty. Ltd.
Yarra Falls 452 Johnston Street
Abbotsford Victoria 3067
(03) 9415 5000

Legal Advisors

Baker & McKenzie

HIGHLIGHTS

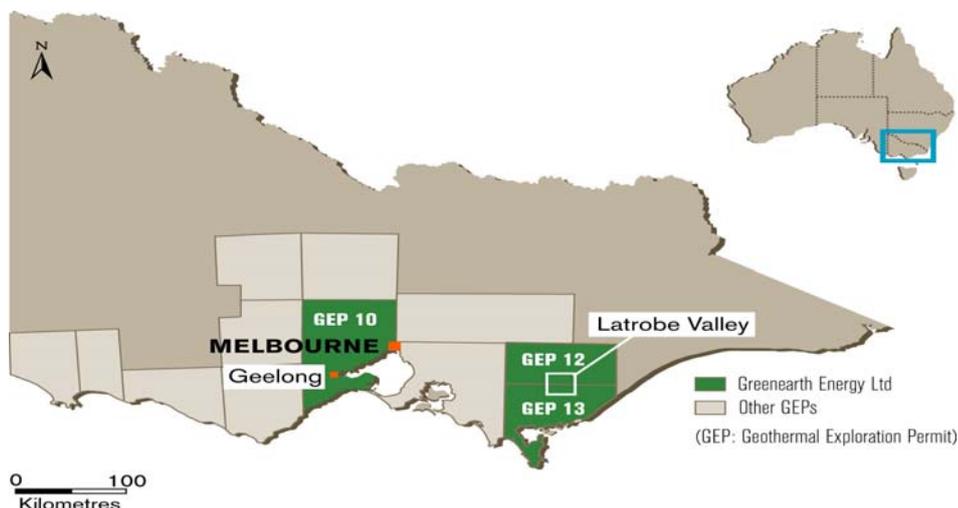
- ❖ **\$25M awarded to GGPP by the Victorian Government under the Energy Technology Innovation Strategy (ETIS)**
- ❖ **\$7M awarded to GGPP by the Australian Government under the Geothermal Drilling Program (GDP)**
- ❖ **Operational planning and stakeholder engagement to commence for GGPP**

ABOUT GREENEARTH ENERGY LIMITED

Greenearth Energy Limited (Greenearth Energy) listed on the Australian Securities Exchange (ASX:GER) on 4 February 2008.

The company holds permits in Victoria where the major energy companies are situated and any potential geothermal resource found will be close to existing infrastructure. Initial geological work is indicating that the company's acreage has the ability to contain hot sedimentary aquifer (HSA) systems as well as Enhanced Geothermal Systems (EGS).

Greenearth Energy is also interested in other areas in particular Indonesia, New Zealand and the wider Pacific Rim.



REVIEW OF OPERATIONS

CORPORATE DEVELOPMENTS

The quarter has focused on awaiting the awarding of grants previously submitted, while continuing to conceptually develop the Geelong Geothermal Power Project (GGPP). Greenearth Energy provided the market, by way of an announcement on October 13 2009, with a summary of Hot Sedimentary Aquifer (HSA) systems worldwide in order to highlight the fact that HSA systems have been proven commercially worldwide.

In early November, the company was advised that its' application for funding under the Commonwealth Governments Renewable Energy Demonstration Program (REDP) had not been successful. This application was submitted in April 2009 and while disappointing, substantial progress had occurred and two further grant funding applications were submitted to assist the GGPP.

The Victorian Government, under the Energy Technology Innovation Strategy (ETIS) program, awarded Greenearth Energy \$25M in early December. This money was granted to assist the first two stages of the company's Geelong Geothermal Power Project. The Stage 1, Proof-of-Concept stage was awarded \$5M to assist to drill a deep geothermal production well, an injection well plus flow testing. Upon successful completion of Stage 1, an additional \$20M has been awarded towards the development of the Stage 2, 12MW_e Geothermal Demonstration Plant.

A second announcement on December 14 that the companies Geelong Geothermal Power Project had been awarded \$7M in Australian Government funding from round two of the Geothermal Drilling Program (GDP) for the project's Stage 1 Proof-of-Concept, further enhancing the project's ability to commence.

Greenearth Energy has been placed in the unique position of being a recipient of both Australian and Victorian Government funding for the company's GGPP Stage 1 Proof-of-Concept stage, totalling \$12M placing the company in a position to achieve its' long term strategic objectives of becoming a sustainable energy producer and commence proper operational planning and stakeholder and community engagement.

The development of the Geelong Geothermal Power Project will involve addressing a number of key issues and progressing the project through a number of stages including:

1. Regulatory – obtaining the necessary approvals, licences and permits
2. Technical – obtaining the most appropriate technologies, accessing and utilising the geothermal resource and electricity distribution
3. Economic and Financial – achieving economic viability and raising capital
4. Environmental and Social – minimising impacts on the environment and the community

Each stage requires a number of environmental and operational permits to be obtained. The process of obtaining these permits includes ensuring that all relevant stakeholders, including the community, are appropriately engaged and are included in the development process.

GGPP Development Stages

The key development stages of the GGPP will include:

- A. A preliminary works stage
- B. Stage 1 - Initial Drilling (Proof-of-Concept)
- C. Stage 2 - Demonstration
- D. Stage 3 - Commercialisation

A. Preliminary Works Phase

The Government funding awarded to the company is contingent upon Greenearth Energy successfully meeting a number of milestones including:

- completing its own capital raising
- obtaining any necessary environmental approvals
- successfully completing various survey's, studies and tenders

B. Stage 1 - Initial Drilling (Proof-of-Concept)

Upon successful completion of the above list of tasks it is planned to drill two wells to a depth of 4 km and flow test geothermal fluids sometime in the second half of 2010. The drilling operation requires an area of approximately 1.5 hectares and will take 3-4 months to complete.

The key objectives of the initial drilling are to:

- confirm the temperature at depth
- confirm the flow rate of geothermal fluids
- demonstrate an adequate geothermal resource for Stage 2

Confirmation of adequate flow and temperature conditions at depth are critical considerations that would enable Greenearth Energy to proceed to the next stage.

During this stage Greenearth Energy will continue its investment attraction and stakeholder and community engagement activities.

C. Stage 2 - Demonstration 12 MW_e Power Plant

The aim of the initial 12 MW_e power plant is to demonstrate power generation and establish the commercial viability of this type of geothermal energy development in this location.

With the establishment of the necessary fluid flow and temperature at depth from the initial drilling, the next steps are for Greenearth Energy to:

- obtain all relevant licenses and permits (production)
- conduct its own capital raising
- stakeholder and community engagement
- obtain all necessary environmental approvals

Greenearth Energy can then proceed with the drilling of two more deep wells from the same site, and the construction of a 12 MW_e Organic Rankine Cycle (ORC) power plant.

The type of power plant envisaged covers a small area (approximately 4 hectares) compared to conventional power plants previously constructed in Victoria.

D. Stage 3 - Construction of Further 12 MW_e Power Plant Modules (Commercialisation)

If it is successfully demonstrated that the generation of electricity from a 12 MW_e ORC unit is commercially viable, Greenearth Energy will continue to:

- obtain all relevant licenses and permits (production)
- conduct its own capital raising
- stakeholder and community engagement
- obtain all necessary environmental approvals

As this project is still in a preliminary stage the location and layout of power plant modules are purely conceptual and are subject to technical, environmental and community requirements.

The location of the initial 12 MW_e plant and further power plant modules and infrastructure will require community and stakeholder engagement, particularly with the local community, landowners and planning authorities. It is likely that there will be the ability to vary sites and particular infrastructure layout as the project progresses. These processes will be undertaken with a view of minimising any environmental and social impacts. Stakeholder input and the technical requirements of the project will inform project development and operation, including site selection, vegetation screening, and appropriate routing and potentially the undergrounding of power lines.

OPERATIONAL ACTIVITIES

Otway Basin - Geelong Area (GEP 10) - 100% Equity

Geelong Geothermal Power Project Work Program

Work continued on the planning of the Geelong Geothermal Power Project, while three grants were being assessed. A number of separate updates were given separately in regards to each submission and a favourable decision was given to the company, via the awarding of two grants.

The general details of the project and its indication of the broad future process have been detailed in Corporate Developments. Technically, work will continue to develop the well designs from a conceptual nature to detail specification in the coming months to allow for the tendering process for the related services needed to drill the first well. As advised, this will be done in conjunction with stakeholder and community engagement.

Magneto-telluric (MT) Resistivity Survey

Greenearth Energy undertook magneto-telluric (MT) surveying in the Bellarine area of GEP10 in November 2008. Initial interpretation of this data was considered inconclusive and as such Greenearth Energy has contracted SKM to undertake further inversion modelling and interpretation using ancillary data as constraints. It is hoped that this work will better indicate the effectiveness of the MT method for identifying the basement/Eumeralla formation contact and potential hot sedimentary aquifers.

Gippsland Basin (GEP 12 and 13) - 100% Equity

Magneto-telluric (MT) Resistivity Survey

During the quarter, planning proceeded for a magneto-telluric (MT) geophysical survey in the Latrobe Valley area. The magneto-telluric method involves the measurement of naturally occurring magnetic and electric fields that propagate through the earth. Measurement of such fields allows for the resistivity structure (in 3D) of the earth to be deduced. Variations in resistivity may allow for the

mapping of more resistive basement rocks beneath a thick, less resistive sedimentary pile as occurs in the Latrobe Valley/Gippsland Basin. MT surveys may also identify zones of reduced resistivity consistent with enhanced temperatures and water saturated aquifers associated with geothermal systems.

The general location of the MT Survey has been tentatively selected in order to give 3D coverage over the areas considered most prospective for geothermal resources. We are currently assessing time availability and quotes received from a number of contractors who specialise in undertaking such surveys and will make a selection in due course. Upon selection of a suitable contractor, operational planning will commence. The company proposes conducting the MT survey in the first half of 2010 and it will be a joint operation with Lakes Oil N.L. under the co-ordination agreement, which exists between the two companies.

Basement Modelling Study

The Company, jointly with Lakes Oil N.L., received the results of a basement modelling study of the Gippsland area utilising existing data sources. This work undertaken by consulting company 3D-GEO Pty. Ltd. involved the reinterpretation of existing seismic data throughout the onshore Gippsland basin. Key onshore and offshore wells which penetrate basement and basement outcrops were used to constrain the depth interpretation. Further constraint was provided through the inversion of potential field data (magnetic and gravity). Greenearth Energy is currently assessing this work relevant to our existing interpretations of the geology of the Latrobe Valley.

Micro Earthquake (MEQ) Monitoring – Pilot Trial

The sondes, which were placed in position in November 2008, have been continuously monitoring the occurrence of natural sub-surface seismic activity which will be collated and interpreted.

Sufficient data has now been acquired from the geophones and forwarded to Auckland University to interpret. We are awaiting receipt of the final report in order to assess the ability of this technique to detect the micro seismic events necessary to accurately map the geological structure of the subsurface.

SIGNED ON BEHALF OF GREENEARTH ENERGY LTD.



Mark Miller
Managing Director
Greenearth Energy Limited

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

GREENEARTH ENERGY LIMITED

ABN

60 120 710 625

Quarter ended ("current quarter")

31 DECEMBER 2009

Consolidated statement of cash flows

	Current quarter \$A '000	Year to date (6 months) \$A '000
Cash flows related to operating activities		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for: (a) exploration and evaluation	(60)	(542)
(b) development	-	-
(c) production	-	-
(d) administration	(981)	(1,285)
(e) capital raising costs	-	-
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	1	16
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 (a) Net movement in GST suspense account	23	(10)
Net operating cash flows	(1,017)	(1,821)
Cash flows related to investing activities		
1.8 Payment for purchases of: (a) prospects	-	-
(b) equity investments	(2)	(14)
(c) other fixed assets	-	-
1.9 Proceeds from sale of: (a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	-	-
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Debtors	-	-
Net investing cash flows	(2)	(14)
1.13 Total operating & investing cash flows (carried forward)	(1,019)	(1,835)

Appendix 5B – Greenearth Energy Limited (GER)
Mining exploration entity quarterly report – 31 DECEMBER 2009

	Current quarter \$A'000	Year to date (6 months) \$A'000
1.13 Total operating & investing cash flows (brought forward)	(1,019)	(1,835)
Cash flows related to financing activities		
1.14 Proceeds from issues of shares options, etc.	-	-
1.15 Proceeds from sale of forfeited shares	-	-
1.16 Proceeds from borrowings	-	-
1.17 Repayment of borrowings	-	-
1.18 Dividends paid	-	-
1.19 Farm-in/Joint Venture contributions	-	-
Net financing cash flows	-	-
Net increase (decrease) in cash held	(1,019)	(1,835)
1.20 Cash at beginning of quarter/year to date	4,653	5,469
1.21 Exchange rate adjustments to item 1.20	-	-
1.22 Cash at end of quarter	3,634	3,634

**Payments to Directors of the entity and associates of the Directors;
Payments to related entities and associates of the related entities.**

	Current quarter \$A'000
1.23 Aggregate amount of payments to the parties included in item 1.2	201
1.24 Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Directors Fees: \$128,075

Consulting and professional fees paid to Director-related entities: \$73,254

Non-cash financing and investing activities

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

None

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

None

Appendix 5B – Greenearth Energy Limited (GER)
Mining exploration entity quarterly report – 31 DECEMBER 2009

Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements – Bank overdraft	-	-

Estimated cash outflows for next quarter

	\$ A'000
4.1 Exploration and evaluation	2,500
4.2 Development	-
Total	2,500

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$ A'000
5.1 Cash on hand and at bank (item 1.22)	3,634	4,653
5.2 Deposits at call	48	48
5.3 Bank overdraft	-	-
5.4 Investments in listed companies (market value)	67	118
Total: cash at end of quarter	3,749	4,819

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1		Interests in mining tenements relinquished, reduced or lapsed		
6.2		Interests in mining tenements acquired or increased		

Appendix 5B – Greenearth Energy Limited (GER)
Mining exploration entity quarterly report – 31 DECEMBER 2009

Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Number issued	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 Preference securities <i>(description)</i>	-	-		
7.2 Changes during quarter	-	-		
(a) Increases through issues				
(b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	67,616,344	50,483,010		
7.4 Changes during quarter				
(a) Increases through issues	100,000	100,000	\$0.00*	\$0.00*
(b) Decrease through returns of capital, buy-backs	-	-		
7.5 +Convertible debt securities <i>(description)</i>	-	-		
7.6 Changes during quarter				
(a) Increases through issues	-	-		
(b) Decreases through securities matured, converted	-	-		

*Issued to Managing Director for nil consideration as part of bonus component of remuneration package

Appendix 5B – Greenerth Energy Limited (GER)
Mining exploration entity quarterly report – 31 DECEMBER 2009

			<i>Exercise price</i>	<i>Expiry date</i>
7.7	Options			
	<i>Directors</i>	4,500,000	-	45 cents
	<i>Staff</i>	1,500,000	-	45 cents
	<i>Man. Director</i>	1,000,000	-	20 cents
	<i>Man. Director</i>	2,000,000	-	20 cents
	<i>Third parties</i>	33,333,333	-	45 cents
	<i>Third parties</i>	2,000,000	-	45 cents
	TOTAL	<u>44,333,333</u>	-	
7.8	Issued during the quarter	-		
7.9	Exercised during the quarter	-		
7.10	Expired during the quarter	-	-	-
7.11	Debentures			
	<i>(totals only)</i>	-	-	
7.12	Unsecured notes			
	<i>(totals only)</i>	-	-	

Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Law or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.

Sign here: Date: 14 January 2010
Company Secretary

Print name: **Vicki Kahanoff**

Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.

Appendix 5B – Greenearth Energy Limited (GER)
Mining exploration entity quarterly report – 30 SEPTEMBER 2009

- 2 The “Nature of interest” (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, AASB 1022; *Accounting for Extractive Industries* and AASB 1026: *Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complies with.

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