



**Greenearth  
Energy Ltd.**

***Quarterly Activities  
Report  
31 March 2015***

***Intelligent Sustainable  
Profitable Solutions***



# Corporate Directory

## Directors

Robert J. Annells (Non-Executive Chairman)  
John T. Kopcheff (Non-Executive Director)  
Samuel Marks (Managing Director)  
Phillip Zajac (Non Executive Director)

## Company Secretary

Robert Smith

## Registered Office

Level 14  
500 Collins Street  
Melbourne Victoria 3000

**Telephone:** (03) 9620 7299

**Facsimile:** (03) 9629 1624

## Securities Exchange

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

## Auditors

Pitcher Partners

## Legal Advisors

Baker & McKenzie

## Bankers

Westpac Banking Corporation

## Address for Correspondence

P.O. Box 24  
Collins Street West  
Victoria 8007

Email: [greenearth@greenearthenergy.com.au](mailto:greenearth@greenearthenergy.com.au)

Website: [www.greenearthenergy.com.au](http://www.greenearthenergy.com.au)

## Share Registry

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



# **Greenearth Energy Ltd**

*Intelligent Sustainable Profitable Solutions*

## **Highlights**

### **Vivid Industrial**

- Growth in forward order book in Australia & New Zealand across industrial & infrastructure sectors
- Extension of technology rights through Asia, Africa and North America
- First installations of new adjacent technology: cloud-based electricity consumption monitoring
- Continued to build the opportunity pipeline across Australia, New Zealand and South East Asia

### **NewCO2Fuels**

- Progressing European pilot project for anticipated 2016 development
- Enhancing pilot-scale reactor design for European project and other global opportunities
- Pursuing business development with potential partners across Europe, Korea, China and North America

### **Group**

- Share placement at 8.5 cents per share, raising \$4.2m to accelerate business growth and for working capital purposes



# Greenearth Energy Ltd

*Intelligent Sustainable Profitable Solutions*

## Introduction

On the 31st March, Greenearth completed a successful capital raising process through a share placement. I would like to take this opportunity to welcome the new shareholders to Greenearth Energy and thank the current shareholders for their ongoing support. The Greenearth story continues take very positive steps towards fulfilling the opportunities across our growing markets.

The share placement was well oversubscribed and added several small-cap and micro-cap fund managers to the register. This validation and support is very pleasing. Furthermore, 2015 sees Greenearth with great goals and aspirations for the coming 12 months and beyond, for both Vivid Industrial and NewCO2Fuels(NCF), this placement will assist Greenearth bringing these goals to fruition.

During the quarter, Vivid Industrial made progress on both sales strategy and long term growth positioning. There were substantial achievements on the customer side, including securing orders for port facilities in New Zealand, and after a successful trial in the prior quarter, securing the order for a commercial car park for one of Australia's largest shopping centre owners.

An exciting development during the quarter has been evolving Vivid Industrial beyond being a company singularly focused on "lighting", to being an innovative energy efficient industrial solutions business, focused on broader technologies across the industrial sector. This has been initially achieved with the deployment of a new, cloud-based energy monitoring tool that provides real time, device-level energy usage data to our customers, enabling unprecedented insights into a customer's energy consumption data. This offering is complementary to Vivid Industrial's current lighting product ranges and is gaining traction with our client base.

The team at NCF continued to develop its award winning technology, preparing for the pilot opportunities in Europe and further afield. The focus during the quarter was on progressing pilot scale reactor designs and business development activities in response to interest from potential customers with high CO<sub>2</sub> emissions and high energy usage levels. Interest from corporations in Asia, Europe and North America continues to grow, and the team remains focused on the commercialisation of the current proven technology.

SIGNED ON BEHALF OF GREENEARTH ENERGY LTD



**Samuel Marks**  
Managing Director  
Greenearth Energy Limited  
**30 April 2015**



## Vivid Industrial

Vivid Industrial continues to gain traction across a broad industrial and infrastructure client base in Australia and now into New Zealand. Growth in forward orders (for delivery subsequent to the March 2015 quarter) came predominantly from proof-of-concept project wins for large, blue-chip and government owned customers in both Australia and New Zealand. These contract wins were spread across a range of target markets including ports, large commercial shopping centre car parks and car yards.

Vivid Industrial focuses on delivering the highest quality outcome for our customers, every time. An example of this was a recent project during the quarter, where we were able to provide the client with improved light level (thereby maximising energy savings) and a fully financed solution, enabling a cash flow positive result from day one. In essence, this means the customer's expected energy savings alone, delivered by our system, are larger than the cost of the financed solution. Overall, this solution will provide a savings benefit to the customer of at least four times the initial investment.

Vivid Industrial's growth strategy involves becoming a fully integrated industrial technology solutions provider, offering smart energy-focused solutions to industrial customers, with the initial focus on smart lighting. We continue to seek new and evolving products internationally and often uncover technologies that are complementary and value adding for customers. The latest addition to our product stable is a cloud-based energy consumption monitoring technology, which enables customers to improve operational efficiency with wireless, cost effective device-level energy monitoring. The product range is highly capable, highly advanced, proven and reliable. Recently completed installations of this technology are performing at or above expectations and delivering unprecedented insights into our customers' energy usage.

The sales opportunity pipeline continues to grow and strengthen, with the range of technologies available to our customer base also expanding rapidly. After securing product and technology rights during the quarter into the Americas, South Africa and parts of Asia, the long term opportunities for the Company are even more impressive. Further, our proprietary technologies (which provide additional value to our technology partners) are also beginning to receive increased interest from overseas industry participants, enabling new and positive conversations with our technology partners and potential distributors. Closer to home, Vivid Industrial continues to review pre-selected Victorian and NSW based Channel partners and other rapid growth opportunities.



## About Vivid Industrial

Vivid Industrial is a market leading provider of innovative energy efficient industrial solutions which is wholly owned by Greenearth Energy Ltd. This business provides customised, intelligent and energy efficient luminaire and lighting control solutions. We work with industrial and infrastructure businesses to craft a complete lighting solution that reduces costs and energy usage, now and longer term. We are a forerunner in the region for the development of the "Internet of Lights" model, closely aligned to the ever growing "Internet of Things".

The Vivid Industrial team has a wealth of experience across technology design, engineering and project management. We partner with businesses to first understand their needs and operations. Then, we provide the right solutions.

**The business delivers industrial lighting and technology solutions that, put simply, make sense and meet an organisation's true needs.**



## **NewCO<sub>2</sub>Fuels**

The focus of NewCO<sub>2</sub>Fuels (NCF) continues to be in two major areas: firstly, the development of a European pilot project in a facility operated by one of the world's largest steel manufacturers; and secondly, ongoing business development to create new opportunities with significant industry participants across various international industries.

### **Pilot Projects & Commercialisation**

As NCF moves forward towards a pilot system, research and development is focused on enhancing its technology that simultaneously dissociates CO<sub>2</sub> and H<sub>2</sub>O. The meaningful advantage of this particular technology is that it is a single, pollution free step, which produces syngas (in pre-determined, controlled compositions of Hydrogen and Carbon Monoxide) according to customer requirements and specifications. Potential customers repeatedly state that this aspect of the technology is a key advantage to NCF's process: allowing customers to select the end products generated from the process according to their specific commercial requirements.

In addition, significant progress has been made in the design of the fundamental elements of the integrated pilot scale reactor. The final design will combine the needs and requirements collected from the customer, with the technical challenges associated with the innovative technology of NCF. This final design takes into consideration performance, cost, reliability, serviceability and other aspects of this innovative product. The team uses sophisticated analysis of thermal stresses and simulations of heat and mass flow to verify the design and insuring long term performance of the product upon installation.

### **Ongoing Business Development**

To ensure commercialisation is successful, ongoing marketing of the technology, as well as its financial and environmental opportunities, continues to be a major focus. During the Quarter, discussions were undertaken with potential partners from a large variety of industries across Europe, America and Asia, and address issues such as:

- Hosting pilot projects;
- Evaluating possible integration with different global industries,
- Reviewing the potential alignment of NCF technologies to specific innovative products; and
- Attractive funding arrangements for pilot and long term opportunities.

## NewCO<sub>2</sub>Fuels in the media

### NoCamels - Israeli Innovation News:

**NewCO<sub>2</sub>Fuels Markets Revolutionary Alternative To Fuel Based On Water And CO<sub>2</sub>, Mar. 18, 2015**

<http://nocamels.com/2015/03/newco2fuels-fuel-alternatives-co2-water/>

### IE School of Communication:

**Make impossible things possible, Feb. 2, 2015**

<http://ieschoolofcommunication.blogs.ie.edu/2015/02/02/1805/>

### JSpace news:

**Israeli Firm Turns CO<sub>2</sub> Into Fuel, Jan. 21, 2015**

<http://www.jspacenews.com/israeli-firm-turns-co2-fuel/>

### ISRAEL21c:

**Factory waste morphs into clean syngas, Jan. 15, 2015**

<http://www.israel21c.org/headlines/factory-waste-morphs-into-clean-syngas/>



## About NewCO<sub>2</sub>Fuels

In June 2014, Greenerth Energy Ltd (Greenerth) advised that the Group had further negotiated details of its investment in NewCo2Fuels Israel (NCF) to acquire up to 33.33 percent. Under this agreement, Greenerth commenced payments to NCF, with the first instalment in June 2014 and the remainder of the USD\$3m investment due by the end of 30 June 2015. The investment is subject to partial claw-back by NCF should less than USD\$3m be ultimately invested by Greenerth, or unless otherwise negotiated.

On completion of the investment, Erdi Fuels Pty Ltd (Erdi Fuels) and Greenerth will be equal shareholders in NCF at 33.33 percent each and the remaining percentage of NCF Shares will continue to be held by founders, current staff and Yeda Research & Development Co. Ltd. (Yeda), based at the Weizmann Institute in Israel.

In 2011 Greenerth Energy secured an exclusive worldwide Research and License Agreement for a revolutionary technology that had the ability to convert CO<sub>2</sub> emissions to fuel. Greenerth and Erdi Fuels' previous arrangements with NCF (as described in the 2013 annual report), including the royalty stream previously available to Greenerth, have been renegotiated and replaced by this new structure outlined in the above paragraph. Erdi Fuels and its associates have invested US\$9m into NCF to reach its current milestones.

The CO<sub>2</sub> to fuel conversion technology concept, successfully developed and proven in laboratory trials in Israel by Professor Jacob Karni and his group at the Weizmann Institute of Science, involves a new method of using concentrated solar energy for the dissociation of Carbon dioxide (CO<sub>2</sub>) to Carbon monoxide (CO) and Oxygen (O). The same system can also dissociate water (H<sub>2</sub>O) to Hydrogen (H<sub>2</sub>) and Oxygen (O), at the same time it dissociates the CO<sub>2</sub>. CO, or the mixture of CO and H<sub>2</sub> (called Syngas) can then be used as a gaseous fuel (e.g. in power plants), or converted to liquid fuel (e.g. methanol or other transportation fuels) which has the potential to be stored, transported and used in motor vehicles. Oxygen produced can be used in the combustion of the clean fuel or elsewhere.

**Review video at the attached link for further information on the NCF business:**

[http://www.youtube.com/watch?v=vH-YZdqB\\_SE](http://www.youtube.com/watch?v=vH-YZdqB_SE)

**NewCO<sub>2</sub> Fuels Website:**

<http://newco2fuels.co.il/>



## Geothermal Energy

In March 2014 Greenearth Energy received Victorian Government relief from the work permit requirements for our three Australian Geothermal leases (identified below). The relief extends until May 2015, at which point Greenearth is entitled to apply to extend it into the future.

The prolonged discussions with the Victorian Government, specifically the Department of Primary Industries (DPI), led to Greenearth submitting three requests for suspension and extension for all our current exploration permits as follows:

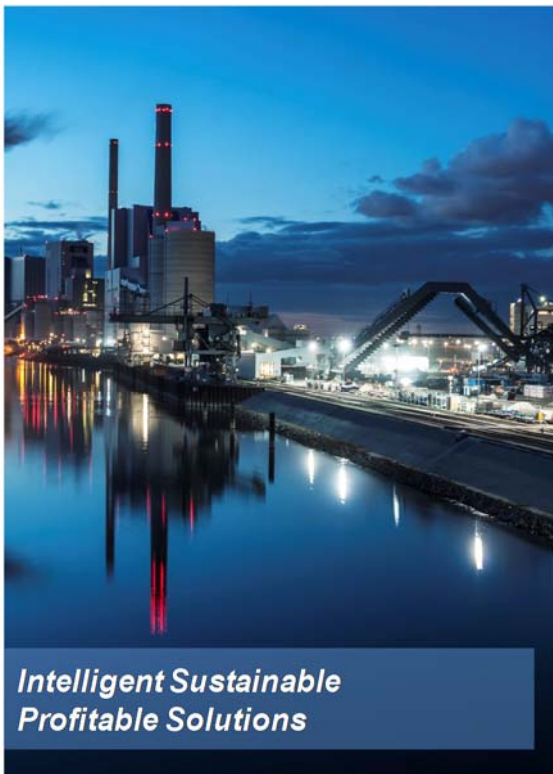
- **Geothermal Exploration Permit 10;**  
Located in the greater Geelong / Anglesea region;  
**Suspended through May'15**
- **Geothermal Exploration Permit 12;**  
Located in the Latrobe Valley region;  
**Suspended through May'15**
- **Geothermal Exploration Permit 13;**  
Located in the Latrobe Valley region;  
**Suspended through May'15**

## Other

The company completed a share placement at 8.5 cents per share raising \$4.2m, to accelerate business growth and for working capital purposes. The placement was settled subsequent to the end of the quarter.

## Significant Changes in the State of Affairs

There were no significant changes during the relevant period that have not been previously disclosed.



At the date of this report, Greenearth Energy has approximately 1,377 shareholders, with an issued capital structure of:

Total Listed Ordinary Shares	246,975,003
Total Unlisted Options	27,950,000



Samuel Marks  
Managing Director  
Greenearth Energy Limited  
**30 April 2015**

*The images contained in this document are of a generic nature and are not intended to be representative of specific locations, unless noted.*