

## **ASX AND MEDIA RELEASE 9 NOVEMBER 2011**

# PACIFIC HEAT AND POWER CONTRACTS FOR BRINE TESTING WORK WITH NEWCREST MINING

Greenearth Energy Limited (ASX:GER) is pleased to announce that its subsidiary, Pacific Heat and Power Pty Ltd (PHP), has recently been awarded a services contract with Newcrest Mining's Lihir operations for geothermal brine testing services.

The project involves evaluating the low temperature brine that is currently under-utilised, using a specially designed test rig. The project is part of Newcrest's efforts to maximise the value from the geothermal heat resources that are available to them. In this application PHP has taken a lead coordination role between international equipment suppliers and local geothermal experts. The results of the project will provide critical information required to select and design a Turboden Organic Rankine Cycle (ORC) system that maximises the geothermal power production, whilst minimising maintenance requirements and ensuring high reliability.

Similar applications have been utilised elsewhere, using Turboden's ORC equipment. As an example of what may be achieved, Turboden recently completed contracts for three 5MW<sub>e</sub> geothermal systems to customers in Germany, operating on temperature sources similar to the temperature of brine at Lihir island, brine from separators in high temperature geothermal systems, or to be found in Australian geothermal applications.

Turboden's range of equipment includes modular ORC units with high efficiency, ranging in sizes from  $1 \text{MW}_{\text{e}}$  to  $10 \text{MW}_{\text{e}}$  and scalable solutions for larger plants. Geothermal Turboden ORC can produce electricity from geothermal sources with medium to low temperature, ranging between 90°C – 180°C.

Managing Director of Greenearth Energy Mark Miller said, "We are extremely pleased to be working with Newcrest Mining in maximising the electrical output from their geothermal operations, and with a view to producing further emissions-free power at the site.

"This activity strengthens our belief that there is a substantial future for ORC technology in the Pacific Islands. Our range of power generating systems, complimentary services and associations with skilled engineering companies has the potential to efficiently deliver significant megawatts of emissions free, or low emissions power in Australia and the wider Pacific Rim."

For more information, please contact Greenearth Energy on (03) 9620 7299.

**Mark Miller** 

Managing Director

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#### **About Newcrest Mining**

Newcrest Mining Limited is a leading gold producer in Australia, the Pacific and Asia and one of the largest gold companies in the world with a world class portfolio of operating mines across four countries and a combined annual production of over 2.7 million ounces of gold.

Newcrest is focused on maintaining a safe environment for our employees, developing and operating mines in line with leading environmental standards and embracing a strong sense of commitment to the local communities around its operations. Newcrest's vision is to be the 'Miner of Choice' for all stakeholders including its employees and contractors, local communities and shareholders. Social responsibility, safety and sustainability are the fundamental guideposts to Newcrest's vision.

#### **About Turboden**

Turboden is specialized in the applications of Organic Rankine Cycle technology, a technology which allows to produce electric power efficiently and in a user friendly way, from low temperature and/or low power heat sources. A Pratt and Whitney Power Systems Company since 2009, Turboden specialises in the providing businesses with generative and cogenerative solutions from renewables and heat recovery with ORC technology.

### **About Pacific Heat and Power Pty Ltd**

Pacific Heat and Power (PHP) have a stable of technologies that can turn losses and inefficiencies into a valuable resource through making electricity for use on site or sale to the grid. Our products are based on proven world class technologies that provide customers with increased energy productivity, energy reliability, operational savings and lower greenhouse gas emissions and include:

- Organic Rankine Cycle Turbines from Pratt & Whitney Power Systems and Turboden including packaged systems between 0.275 – 10 MW<sub>e</sub>, and customised solutions for larger sizes. These are suited for biomass, solar thermal, waste heat and geothermal heat sources.
- Small steam turbines from Energent (275kW<sub>e</sub>)
- Brine testing services for geothermal power projects