



ASX RELEASE AND MEDIA RELEASE 8 JUNE 2012

GREENEARTH ENERGY CO₂ to FUEL CONVERSION TECHNOLOGY A POTENTIAL BROWN COAL EMISSIONS SOLUTION

Greenearth Energy Limited (ASX:GER) and its Israeli joint venture company NewCO₂Fuels Ltd headed by Professor Jacob Karni and his group based at the Weizman Institute of Science report in an announcement made yesterday by the Weizmann Institute of Science that our laboratory proven technology is progressing towards conversion of CO₂ on an industrial scale.

The laboratory proven conversion technology concept involves a new method of using concentrated solar energy for the dissociation of carbon dioxide (CO₂) to carbon monoxide (CO) and oxygen (O₂). The same system can also dissociate water (H₂O) to hydrogen (H₂) and oxygen (O₂), at the same time it dissociates the CO₂. The CO, or the mixture of CO and H₂ (called Syngas) can then be used as gaseous fuel (e.g. in power plants), or converted to liquid fuel (e.g. methanol), which has the potential to be stored, transported and used in motor vehicles.

Managing Director Mark Miller said today; "We are delighted with the progress being made by our Israel based technology partners and believe that our laboratory proven CO₂ to Fuel conversion technology has the potential to further utilise our State's vast brown coal resources into the future.

"Our aim is to prove our breakthrough technology on an industrial scale while working collaboratively with Government and industry to ultimately produce energy in the most cost effective and environmentally friendly way possible."

Please find attached the announcement from the Weizmann Institute of Science and for further information regarding Greenearth Energy's CO₂ to Fuel conversion technology please visit Greenearth Energy at www.greenearthenergy.com.au

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From challenge to opportunity

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Weizmann Institute Solar Technology to Convert Greenhouse Gas into Fuel

An Israeli-Australian venture will use solar technology developed at the Weizmann Institute of Science to reduce carbon dioxide emissions from the burning of brown coal. The venture has been recently launched in Israel by NewCO2Fuels Ltd., a subsidiary of the Australian company Greenerth Energy Ltd., which has acquired an exclusive worldwide license for the solar technology from Yeda, the Weizmann Institute's technology transfer arm.

The Weizmann technology makes use of concentrated solar energy to dissociate carbon dioxide (CO₂) to carbon monoxide (CO) and oxygen (O₂). This method, developed at the Weizmann Institute by Prof. Jacob Karni, also makes it possible to dissociate water (H₂O) to hydrogen (H₂) and oxygen (O₂) at the same time it dismantles the CO₂.

Carbon monoxide (CO), or its mixture with hydrogen called Syngas, can then be used as gaseous fuel, for example, in power plants, or converted to liquid fuel such as methanol, which can be stored, transported or used to power motor vehicles.

The method has proved successful in laboratory trials. NewCO2Fuels Ltd. is now building a solar reactor for the conversion of CO₂ on an industrial scale. Part of the development is being performed in collaboration with the Canadian Institute for the Energies and Applied Research at the Weizmann Institute of Science.

Greenerth Energy expects the new Israeli-Australian venture to help harness the vast brown coal resources in the State of Victoria in south-eastern Australia, whose use has been limited until now by the high CO₂ emission content from this type of coal. The possibility of converting CO₂ to fuel in a clean and efficient manner will turn brown coal into a source of environmentally friendly fuel.

Prof. Jacob Karni's research is supported by the Israel Strategic Alternative Energy Foundation.

The Weizmann Institute of Science in Rehovot, Israel, is one of the world's top-ranking multidisciplinary research institutions. Noted for its wide-ranging exploration of the natural and exact sciences, the Institute is home to 2,700 scientists, students, technicians and supporting staff. Institute research efforts include the search for new ways of fighting disease and hunger, examining leading questions in mathematics and computer science, probing the physics of matter and the universe, creating novel materials and developing new strategies for protecting the environment.

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