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## AUSTRALIAN GOVERNMENT NAMES NCF TECHNOLOGY AS A FUTURE FUEL

NewCO<sub>2</sub>Fuels (NCF) technology included in Australian Government's Alternate Liquid Fuel Technology Assessment (ALFTA) report. Importantly, NCF Technology was:

- The only technology in the report converting solar energy into fuel; and
- The chosen technology to assess solar to DME and solar to MTG as replacements for current liquid transport fuels

Greenearth Energy Ltd ("Greenearth") (ASX:GER) is pleased to announce that the technology being commercialised by its Israel-based associate, NCF, has been included by the Australian Government's Bureau of Resources and Energy Economics (BREE) as part of their analysis of liquid transport fuels.

The NCF technology is the only technology in the report that utilises solar energy in the creation of fuel products.

Further, the NCF technology has been chosen for two alternate fuel paths:

1. **Solar energy to DME:** DME (dimethyl ether) is a clean, colorless gas that is easy to liquefy and transport and a clean burning alternative to LPG (liquefied petroleum gas), diesel and gasoline; and
2. **Solar energy to MTG:** "Methanol to Gasoline" process

Both DME and MTG fuels are alternatives to current petroleum based liquid transport fuels. It is important to note that in Australia alone, the potential market for DME and MTG is considerable and estimated to be worth \$63.5 billion per annum (or 41 billion litres per annum). In addition, the report also highlights that the NCF technology produces a highly valuable co-product of pure oxygen (O<sub>2</sub>).

According to the report, "The results indicate that Australia's fuel supply future could well be different to the present conventional petroleum and biofuel mix. This has likely implications for government policy to further encourage the domestic fuel production and/or distribution of alternative emerging liquid fuels."

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The report also states, "The NCF reactor can be driven from a solar thermal plant and/or excess heat from industrial processes and/or other high temperature heat sources." The NCF technology is optimised when excess heat configuration systems are utilised, as this allows maximisation of processing output and minimisation of capital input (therefore greater yield and lower cost). In a liquid fuel - Levelised Cost of Fuel (LCOF) context, this would likely provide liquid transport fuels competitive with current fuel pricing for consumers in Australia today.

In addition to using renewable solar energy during the generation of alternative fuel, NCF analysis has also demonstrated high compatibility, reduced CO<sub>2</sub> intensity and improved bottom line performance when NCF is paired to major industrial processes including non-renewable Coal to Liquids (CTL) and Gas to Liquids (GTL) fuel paths, as well as gasification and steel making processes.

**The Australian Government's ALFTA report provides confirmation that NCF offers future liquid transport fuel alternatives that are 100% renewable and reduce the CO<sub>2</sub> intensity of non-renewable fuel paths.**

Further details can be obtained at the following website:

<http://www.bree.gov.au/publications/australian-liquid-fuels-technology-assessment>

**Managing Director of Greenerth Energy, Samuel Marks, said;** "We are pleased that the Australian Government has included NCF in this report and are encouraged that NCF's technology was the only technology converting solar energy to fuel. We believe NCF's technology has the potential to provide an alternate and renewable source of transport fuels which could play an important part in reducing Australia's CO<sub>2</sub> emissions and improving the country's transport fuel security.

"This report provides an independent review of only one aspect of NCF technology, the 100% renewable model. While this solar model is just one of our paths to commercialisation, to receive this recognition from the Australian Government is extremely rewarding for the NCF team.

"We look forward to providing further information on the 100% excess heat configuration, and the hybrid configuration, which utilises both solar energy and excess heat. Importantly, current analysis of the excess heat configuration is showing a LCOF (Levelised Cost of Fuel) well below the numbers shown in this report."

**Samuel Marks**

Managing Director

Greenerth Energy Limited

Please direct all enquiries to Samuel Marks, Managing Director, telephone 03 9620 7299.



## About NewCO2Fuels

NewCO2Fuels(NCF) is an Israeli start-up company which was formed in 2011 by a group of scientists and entrepreneurs with the support of Greenerth Energy Ltd and the Erdi Group. NCF was formed to develop and commercialize an innovative system to profitably produce fuels from CO<sub>2</sub> and water, using renewable high temperature heat from solar or excess heat from industry. The system is based on a technology previously developed at the Weizmann Institute of Science and exclusively licensed to NCF.

Review video at the attached link for further information -  
[http://www.youtube.com/watch?v=vH-YZdqB\\_SE](http://www.youtube.com/watch?v=vH-YZdqB_SE)

NewCO2 Fuels Website - <http://newco2fuels.co.il/>

## About Greenerth Energy Ltd

Greenerth Energy Limited is a diversified Australian-based renewable energy company with interests in technology-focussed solutions in the energy efficiency and CO<sub>2</sub>-to-fuel conversion markets as well as conventional geothermal resources in Australia and the wider Pacific Rim.

Greenerth Energy Ltd - <http://www.greenerthenergy.com.au>



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