
CO₂ TO FUEL TECHNOLOGY - STAGE 2 - EFFICIENCY PROVEN

- **NCF stage 2 testing further proves technology, increasing dissociation rate of CO₂ to 800 times original laboratory tests, a fourfold increase from Stage 1 testing announced in January**
- **NCF continuous tests now running for over 100hrs, proving technology stability**
- **NCF currently converting ~15kg CO₂ into ~10kg of CO and 5kg oxygen (O₂) per day**

Further to our announcement on the 14th January 2014, Greenearth Energy Ltd is pleased to announce that the team at NewCO₂Fuels in Israel (NCF) completed the key part of Stage 2 testing, improving the dissociation rate by a factor 800 times increase on original tests using a single device at the Weizmann Institute of Sciences' laboratories in 2010, two and a half years ago. This is a fourfold increase over Stage 1 testing as released in January 2014 by Greenearth.

In passing these two tests, NCF has successfully demonstrated that the technology effectively dissociates CO₂ into CO and O₂ in a heating environment, at a rate which supports a commercially viable product. Stage 2 testing has demonstrated further progress in the NCF technology as well as its commercial scaling methodology, where a simple increase in the number of internal dissociation elements can enable NCF to reach industrial capacity levels.

Stage 2 testing produced excellent results in a heating environment, simulating the industrial waste heat discharge that will be used as one of the energy sources for driving the process. Solar energy can also be used as an energy source for the NCF process. Performance analysis of continuous operation of over 100hrs indicates that the operation stability, processing rate and efficiency were all at or above planned levels.

With the NCF solar receiver already tested and proven, the NCF solar reactor configuration (utilising high temperature heat from a solar based heat source as the final testing phase of Stage 2), is currently on track post the finalisation of the NCF waste heat configuration testing.

This system holds great potential in producing a clean and renewable alternative to fossil fuels using CO₂ emitted from industrial processes as its feedstock. NCF is now discussing possible collaborations with companies in the power-generation, metal production, glass, gasification and other industries. By integrating NCF's system with their facilities, these companies can improve their overall plant efficiencies, turning their CO₂ and/or heat emissions into a profitable product.

CEO of NewCO2Fuels, David Banitt said; "These are very exciting days for NCF. After more than two years of heavy lifting by the NCF team which focused on removing technological barriers, our plans have come to fruition. Measuring such high and reliable performance in the operation of our first module is very rewarding for the NCF team. The excitement is not only from the technology side but also, and I should say most importantly, from the market side. We continue to receive very positive responses and support indicating that there is a strong demand for NCF's technology, especially because of the attractive expected financial performance of systems driven by either waste heat, or solar energy."

Managing Director of Greenerth Energy, Samuel Marks, said; "The team at NCF deserve to be congratulated for delivering an enormous task set by the founders, Greenerth and Erdi Fuels in June 2011. The magnitude of this task can best be grasped when you contemplate that in June 2011, there was no evidence to support that this science could operate at industrial capacities at economies which will enable commercial viability. This has now been overcome. The team is on track to complete the solar testing and NCF are beginning a focus on the commercialisation stage and establishment of a pilot either in Israel, Australia or another country where the appropriate partner exists. With this next milestone of development involving a scaling up to commercial capacities for pilot installations, the track record of the team and technology to deliver gives us great confidence in ongoing success."

Samuel Marks
Managing Director
Greenerth Energy Limited

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From challenge to opportunity

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 CO₂ 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

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 CO₂to fuel conversion markets as well as conventional geothermal resources in Australia and the wider Pacific Rim.

In 2011 Greenerth Energy secured an exclusive worldwide Research and License Agreement via NCF for a revolutionary technology that has the ability to convert CO₂ emissions to fuel. The group's investment is represented by a 50% ownership in NewCO₂ Fuels Ltd (Israel). As described in the June 2012 and June 2013 annual reports, an option deed was entered into which grants Erdi Fuels Pty Ltd the right to acquire Greenerth's 50% ownership of NewCO₂ Fuels Ltd in return for providing the investment into Round A funding of NCF. If this option is executed, a royalty stream will be granted to Greenerth. However, the current ownership structure of the investment in NCF is currently in negotiations.

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



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