ecoglobal

sun + water = energy

FUELS

once in a life time you might come across a project that would dramatically change the way we do things

>>> turn the page to the Energy of the Future

Eco Global Fuels

Sun + Water = Energy of the Future

Executive Summary

Jules Verne in his book The Mysterious Island, wrote the following age:

"Water decomposed into its primitive elements, and decomposed doubtless by electricity, which will then have become a powerful and manageable force. Yes, my friends, I believe that water will one day be employed as a fuel".

In this summary we intend to show that we can:

1) Reduce or eliminate our dependence on Fossil Fuels.
2) Assist in the green environmental act of reducing or eliminating green-house gas production while recycling such into usable fuel.
3) Create a method of fuel production that results in an acceptable ROI.

Eco Global Fuels LLC has researched and developed the most cost-efficient electrolysis unit in the world.

It is based on over 20 years of research and development.

We can make hydrogen 60 % more efficient than anyone else- and we can immediately prove it to you.

Eco-Global Fuels (EGF) electrolysis process is 100% environmentally friendly, renewable, and priced to be commercially competitive in developing "clean" transport fuels without using any coal, gas, oil or electricity.

We have developed a method of producing Ethanol, DME, and Butanol-Aviation grade fuels, by combining our process's Hydrogen production (the lowest cost hydrogen available) with carbon dioxide (waste gas) emissions; hence this venture becomes an evolving positive situation in boosting economies worldwide, cutting back and reducing waste green house gases, and getting our planet off the addiction to fossil fuels.

The USA, Australia and other western economies, need a bold plan to free themselves from fossil fuel. EGF is convinced that we have a model.

The EGF Ethanol model is more cost-effective than corn produced ethanol, with a higher ROI yield without subsidies and without having any effect on food prices, and at the same time helps to reduce green house gases (see appendix 2)

EGF will also produce a range of Alcohol based fuels that are sustainable and renewable. (see appendix 2).

Eco Global Fuels has overcome the cost constraints in producing Hydrogen because of:

a) Eco Global Fuels has researched and developed the most cost-efficient electrolysis unit in the world. Hydrogen is derived from the electrolysis system.

b) Eco Global Fuels has determined an elegant methodology in producing the necessary DC electrical power to produce vast quantities of "Hydroxy gas" (see appendix 3).

c) Eco Global Fuels has developed an innovative technology and process allowing the gases created to be catalytically recombined in a highly efficient and cost effective manner by a proprietary process held by the Company. These products then are normal recognized "fuels" (ethanol, butanol and so forth) capable of being injected into the existing infrastructure and global fuels market.

Eco Global Fuels market potential:
Statistics: The projected consumption rate by 2010 of crude oil is estimated to peak at 110 million barrels per day, this equates to 21.653 Billion Litres of liquid fossil hydrocarbons per day.

A typical production sized EGF Plant is designed to produce 1.16 Billion litres per annum of Enviro-synthetic renewable liquid Alcohol fuels. This sized plant generates an estimated ROI of 17%, which is estimated to be US $3.5 Billion per annum profits.

The EGF Plants necessary to produce 31.216 Billion Litres per day of Enviro-synthetic renewable liquid Alcohol fuels, to eliminate green house gases, is calculated at 9,823 Plants, producing global profits of US $343,801 Billion per annum.

Eco Global Fuels Stage 1 (use of funds)

Construct a "Solar 200 kW Photovoltaic Electric power system" producing a product called "Enviro-Synthetic Ethanol with Oxygen" (this is our Prototype).

Eco Global Fuels (EGF) Electrolysis System and the Yield: 73 Tonnes per (that's 92,710 litres per annum) with 219 Tonnes per annum of Oxygen.

Total EGF Electrolysis System construction costs = {$1.0 Million}.

* Total Solar Photovoltaic Electric plant construction costs= {$1.5 Million}.

* Solar Photovoltaic Ethanol fuel plant/ Land {5,714M2} = {$1 Million}.

Government filings, approvals/Construction overhead = {$0.5 Million}.

Total construction cost = {$4 Million}.

This prototype will set at all parameters and Government approvals to scale up to a production level (100 MW) (SRSF) Plant.

Eco Global Fuels Stage 2 (other cost comparisons available with NDA signed)

Construct a Solar 100 MW (megawatt) production scale plant producing "Enviro-Synthetic Ethanol with Oxygen".

Statistics - Eco Global Fuels (EGF) Electrolysis System and the Yield: Enviro- Synthetic Ethanol of 18,242 Tonnes (or 23.2 Million litres) per annum with 54,627 Tonnes per annum of Oxygen:

Total EGF Electrolysis System construction costs	= {$48 Million}.
Total Solar Thermal Electric plant construction costs	= {$200 Million}.
Solar Thermal Ethanol fuel plant/ Desert {0.625kM2}	= {$2 Million}.
Total construction cost written off over 20 years	= {$250 Million}.
{Enviro-Synthetic Ethanol 23.2 Million litres per annum} x {$2.4 per litre, estimated in 3 years}	= {$55.5 Million per annum}.
{Oxygen 54,627 Tonnes per annum} x {$400 per Tonne, estimated in 3 years}	= {$22 Million per annum}.
Total Enviro-Synthetic Ethanol + Oxygen profit before maintenance costs	= {$77.5 Million per annum}.
Solar Thermal Carbon credits concessions	= {$60,900 per annum}.

Australian Ethanol excise Tax rate including GST per Litre from 2008 to 2015;

{23.2 Million litres per annum x $0.28 per litre}	= — {$6.5 Million per annum}.
Maintenance costs	= — {$10 Million per annum}.
Labor running costs etc	= — {$8 Million per annum}.
Total running costs	= — {$24.5 Million per annum}.

77.5 Million per annum — {24.5 Million per annum}= $53 Million per annum.

Therefore the yield per annum after running costs equates to $53 Million, which represents

{100 x $53 Million}
{$250 Million} = 21% ROI .

Appendix (1) – The Hydrogen Issue - The majority of hydrogenation processes at this stage rely on hydrogen produced from fossil hydrocarbon stocks, which is polluting and inefficient. There has been some discussion in the catalytic cracking of water using high temperature steam, where the heat to do such is derived from nuclear power plants.

Also there is an unsustainable attempt to use cellulose products, such as corn in the production of the Ethanol is increasing the cost of basic foods and grains, having a crippling effect on third world nations and pressure on inflation in industrial nations.

High prices for gasoline and home heating oil are here at present. In the meantime, the 300 coal fired power plants, and 315 natural gas fired plants in the US as well as vehicles everywhere, continue to pour 6.5 billion tons of pollutants and greenhouse gases into the atmosphere annually threatening the planet. Hydrogen by itself is obviously NOT a solution.

Appendix (2) – A massive switch to "green" solar/geothermal/wind power to create electricity combined with the EGF Hydroxy/waste gas catalytic recombination process is the only logical answer to solving the economic run-away situation prevalent with fossil fuel use and shortages.

The recombination process of Hydroxy+Catalyst yields: Ethanol, Butanol, DME etc.

Appendix (3) - By incorporating highly efficient Photovoltaic solar cells, supplemented with wind power, and/or Geo-thermal power, the running costs of a Photovoltaic solar cell farm, equate to US$0.006 per kWh.

A coal-fired power station requires US$0.03 per kWh

The current cost of Photovoltaic solar cells is currently approx. US$4.0 per Watt. But these costs will reduce substantially by 2015 or sooner, reducing to US$1.0 per Watt.

EGF's electrolysis cell technology is 60% efficient with separation of the hydrogen from oxygen, and produces 300 liters per hour @ 1kWh of hydroxy and has been demonstrated, to be efficient and more importantly cost - efficient.

The most important factors in such a system are ultra reliability, cost effectiveness and safety, to produce huge quantities of hydrogen and then, to catalytically produce huge quantities of ethanol, DME and Butanol.

Appendix (5) – Stage 2 computational figures:

The production plant running at 100MW/hr in a 12 hour day, this Solar Thermal Electric power plant will produce Enviro-Synthetic Ethanol equaling 23.2 Million litres per annum, with a landscape plateau footprint as shown below;

{Sun Thermal Energy}	= {1,000 Watts per M2}.
{1000 Watts per M2}	
{2M2/ Parabolic Solar Thermal Collectors Eff.}	= {500 Watts per M2}.
{500 Watts per M2} x {Solar Eff 80%}	= {400 Watts per M2}.
{400 Watts per M2} x {Steam Turbine 40% Eff.}	= {160 Watts per M2}
{M2 footprint}	= {160 Watt/hr}
{100MW/ hours in 12 hours}	
{160 Watts/hr per M2}	= {62.5 hectares or 0.625kM2}.
Therefore the summarised	
cost of construction per Watt	= {$2.0 per Watt/ hour}.
100MW/ hour in a 12 hour day, x $2.0 per Watt	= {$200 Million}.

* Advantages of plant placement – hot desert land found in various locations across the planet is ideal for the location of the facilities.

ECO GLOBAL FUELS
Contact: Roger Green
Telephone: New York + 1- 212 421 2768
E-mail: rogergreen@ozemail.com.au