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Manager of Company Announcements
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Perth WA 6000

12th August 2010

BY E-LODGEMENT

We refer to the announcement made by the company on Monday 9th August 2010 enclosing a presentation delivered at the China-Australia Resource Summit on 9 August 2010.

It has come to the company's attention that slide 17 contained a reference to a 'coal resource goal 300-500Mt'. As this statement did not have a competent person sign-off in accordance with the JORC code, the presentation is resubmitted with this reference deleted. The remainder of the presentation remains unchanged.

Yours faithfully

Andrew Whitten
Company Secretary/Legal Counsel

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# A CLEANER COAL TO ENERGY FUTURE

Presented at the China-Australia Resources Summit
9th – 10th August 2010. Melbourne, Australia

www.cleanglobalenergy.com.au

**Presented by John Harkins**
**Chairman and Managing Director**
**Clean Global Energy Limited**

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# WHAT ARE THE CHALLENGES?

Power and energy shortages

Old and deteriorating infrastructure

Rising costs of supply

Increasing population driving an exponential increase in demand for energy and power

Decreasing supply sources to meet this demand

Increasing sovereign risk to traditional energy sources such as oil and gas

The Peak Oil issue

Climate Change

Global Warming

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# WHAT ARE THE SOLUTIONS?

Economically access and monetise readily available and reliable sources of cleaner energy

CGE intends to become a major provider of commercially viable cleaner energy solutions

We will achieve this by converting deep stranded coal resources into an economical, cleaner energy known as Syngas whichcan be readily converted into power, fertilisers, ultra clean fuels and other products

CGE can achieve this in a cost effective and environmentally responsible way by combining two unique industrial processes – Underground Coal Gasification (UCG) and Gas to Liquids (GTL)

These are *proven*processes that have been operating in commercial form for over 50 years.

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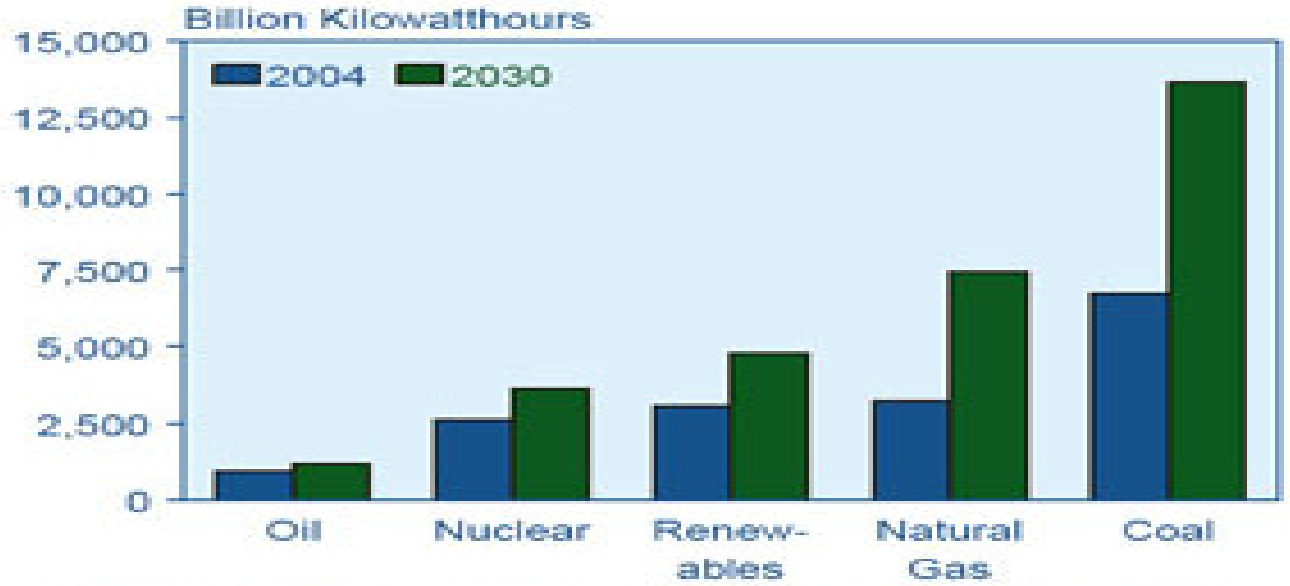
# The big picture on global demand for power

***Global Energy demands will more than double by 2030***

**Figure 63. World Electricity Generation by Fuel, 2004 and 2030**




Sources: **2004:** Derived from Energy Information Administration (EIA), *International Energy Annual 2004* (May–July 2006), web site www.eia.doe.gov/iea. **2030:** EIA, System for the Analysis of Global Energy Markets (2007).

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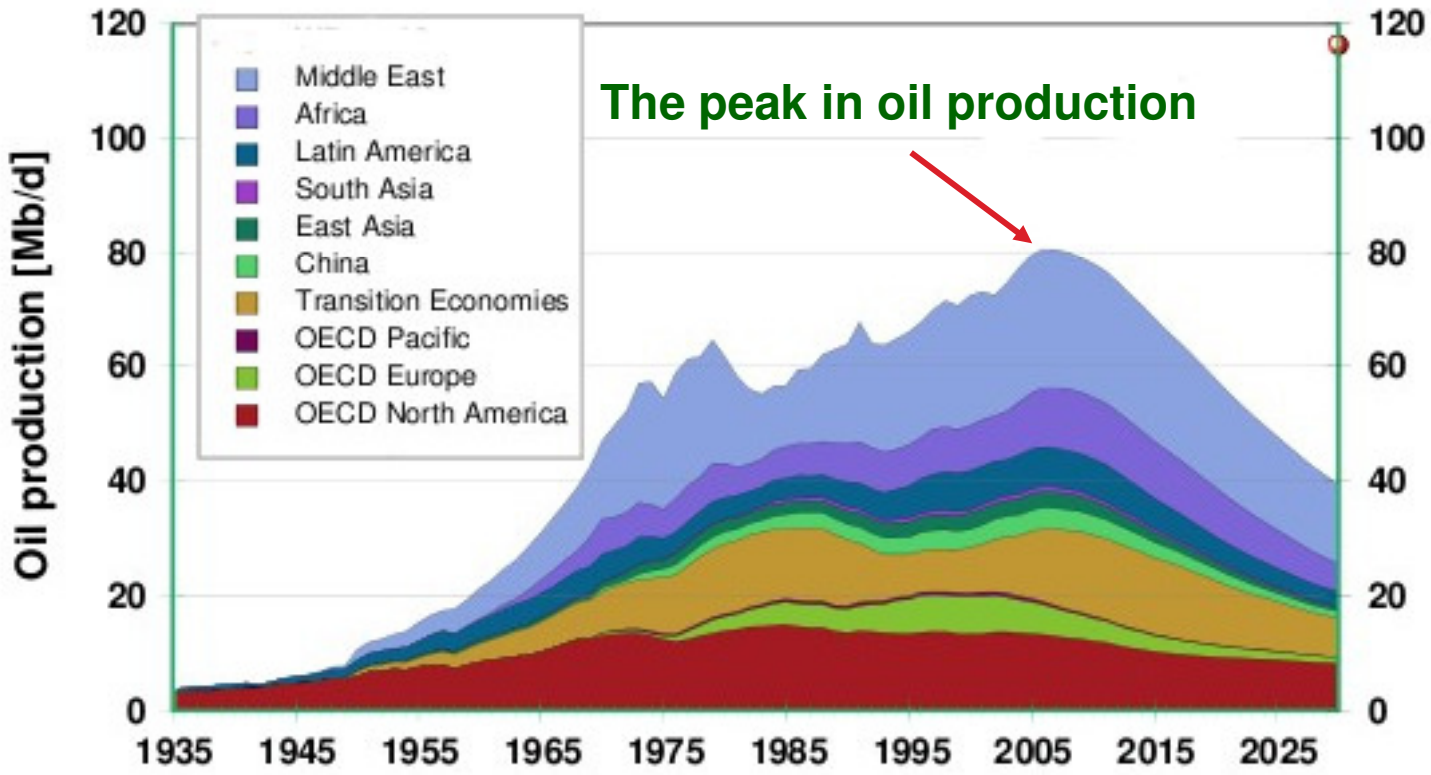
# The big picture on global demand for oil

***Peak Oil is here and demand is outstripping supply capacity from existing oil reserves***



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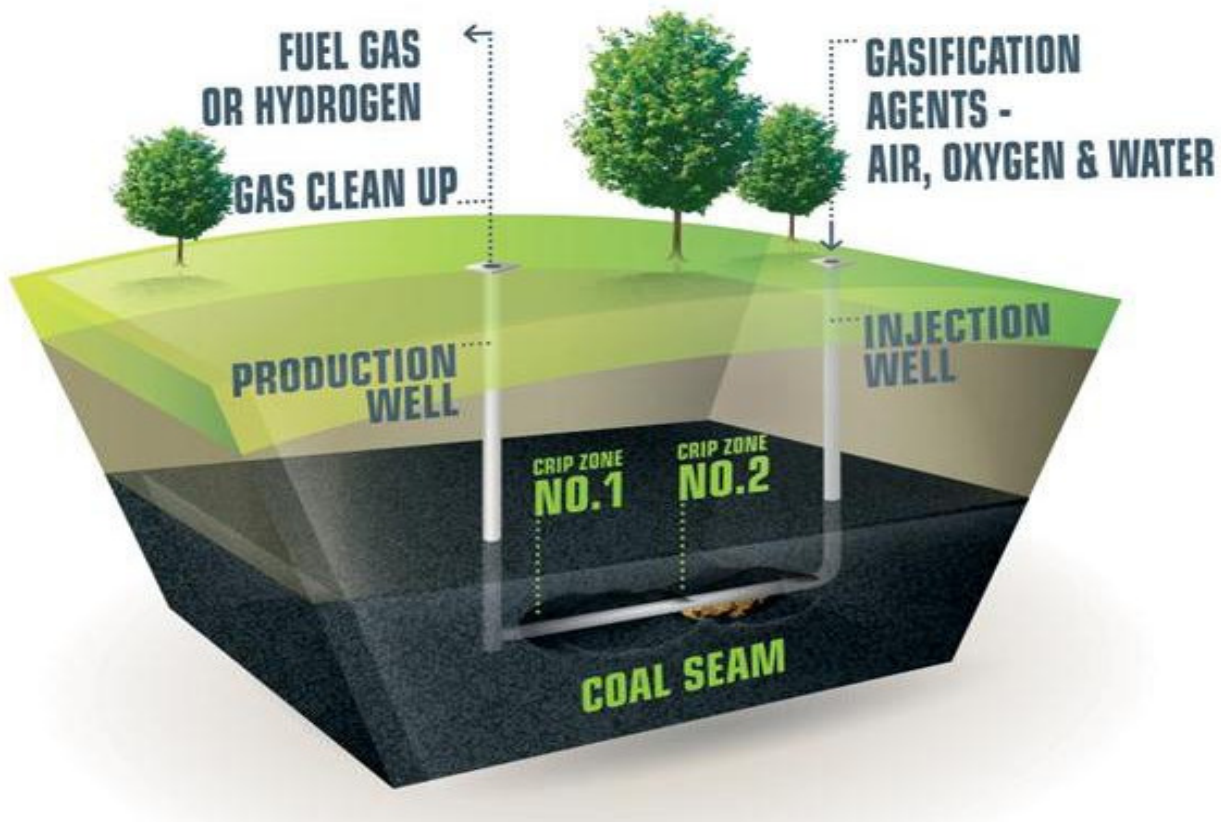
# So what is Underground Coal Gasification (UCG) ?




UCG is a well proven coal extraction method which converts coal in-situ into a cheap and environmentally friendly Syngas This gas is suitable as feedstock to produce power, ultra clean liquid fuels and other chemicals.

The UCG process involves drilling injection and production wells into the coal seam. Oxidant, heat and pressure is introduced into the injection well to commence the gasification process. The resulting Syngas is captured at the production wellhead then cleaned up and CO2 separated prior to end use.

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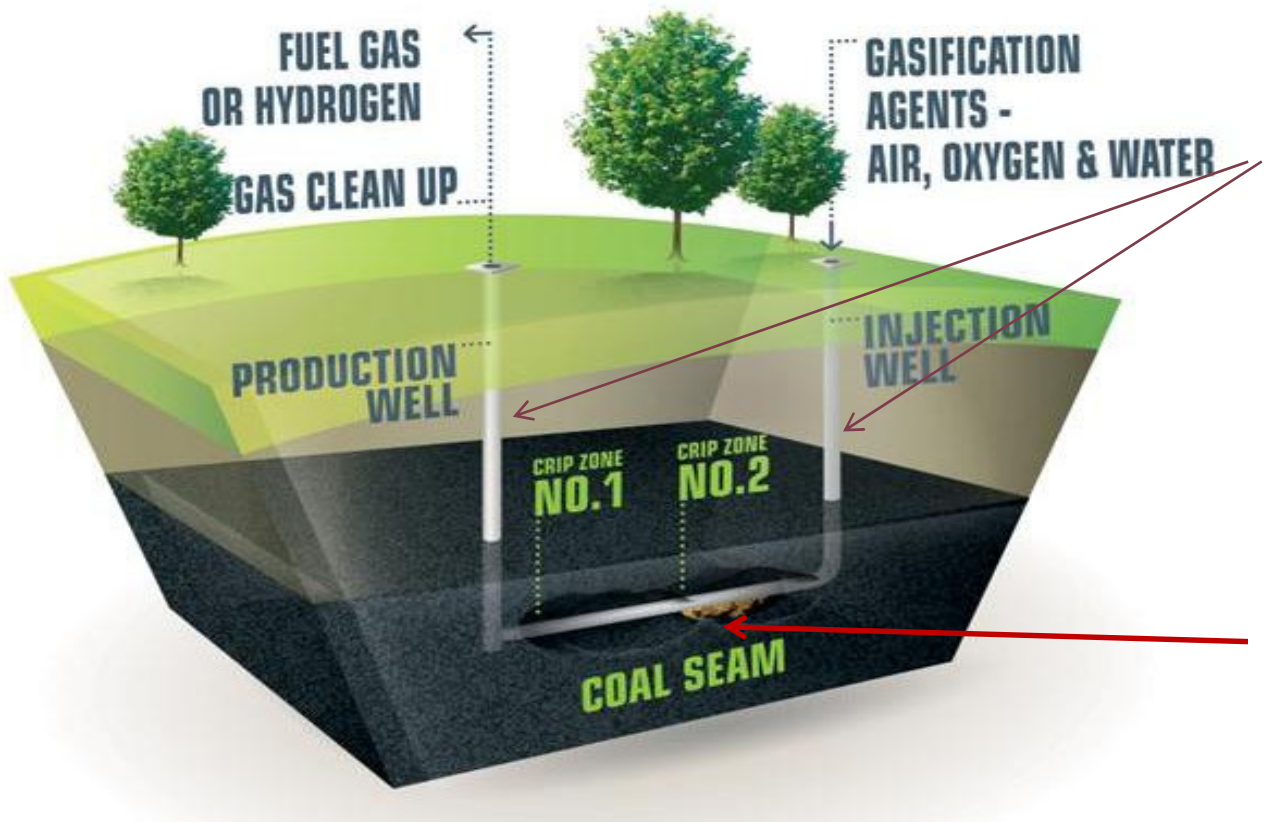
# CGE uses the most efficient, advanced UCG technology the single in-line Controlled Retractable Injection Point process CRIP




Older UCG technology uses a single Injection and Production well and relies on the permeability of the coal to both link and manage the UCG process. This process, used by other UCG companies limits the distance between wells to approximately 50 meters and adds significantly to capital and operational costs.

CGE adds a horizontal CRIP to connect the Injection and Production wells allowing more control over how and where the UCG process takes place. CRIP allows for greater distances of up to 600 meters between the Injection and Production wells. This significantly reduces the capital costs as we don't need to drill as many wells. CRIP also reduces the reliance on the coal formation and provides greater control, output and efficiency.

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# UCG Is Going Global

***World UCG activity is already considerable and increasing every year***

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# CGE's UCG CRIP Technology already proven in a €17m European Trial in Spain

**CGE Director Dr Michael Green is recognised world wide as a leading expert in UCG, having both the practical experience and the technical knowhow to undertake any proposed UCG project.**


*Spanish UCG Site*

**The European UCG trial run by Dr Green successfully proved the efficiency and controllability of the UCG process using CRIP technology. Dr Green has since made further advancements to the CRIP technology which he is currently implementing in commercial projects in the UK and Europe.**

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**Through the production of Syngas from UCG using its CRIP technology which was fully proven in the extensive EU trials in Spain,Clean Global Energy has a really effective solution to cleaner coal utilisation and the oil and energy crisis.**

**This will reduce the global carbon footprint, reduce greenhouse gases and contribute to meeting the challenge of climate change**

***Power***

***Liquid Fuels***

***Chemicals***

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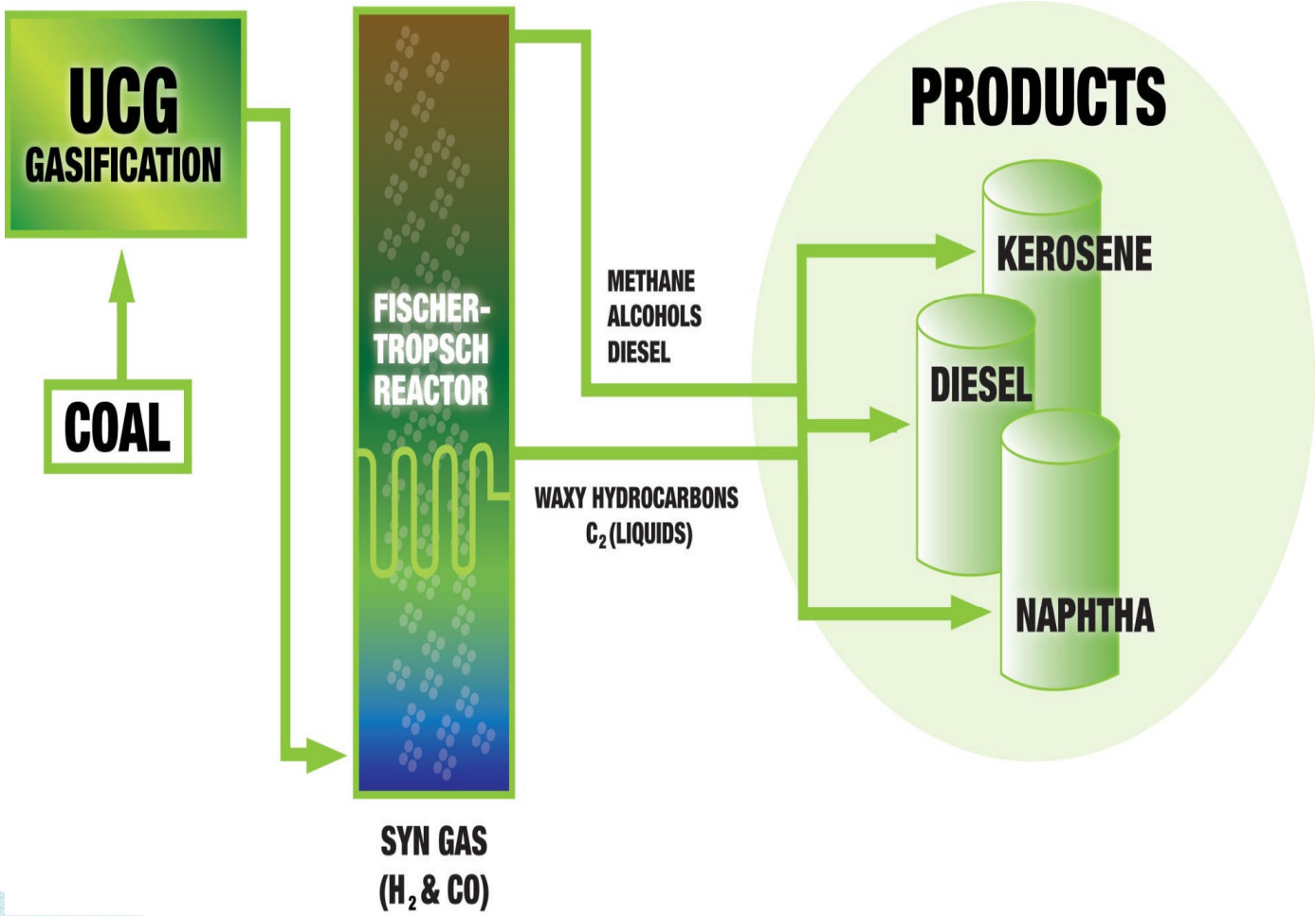
# What is Gas To Liquids (GTL)?

GTL is a process where simple hydrocarbons are joined together to form a long hydrocarbon chain which creates a liquid or syncrude oil that can be upgraded into diesel and other fuels.



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# GTL opportunities using proven and available technology

*Syntroleum's GTL Plant - Catoosa Oklahoma*

*Shells GTL Plant – Bintulu Malaysia*

**GTL technology is readily available from a number of sources such as Sasol, Shell, Syntroleum, Rentech and others. The technology is not new and has been commercially well established for over 50 years**

**CGE will provide a superior low cost GTL technology with a proprietary gas cleanup system that will suit UCG Syngas. The ability to convert UCG Syngas into low cost, clean fuels is a strategic part of CGE's business plan in the middle term.**

**The conversion of coal to ultra clean diesel and other fuels the UCG and GTL processes provide is not only a real response to Peak Oil, but also a part-solution to green house gas emissions.**

# Clean power generation opportunities

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UCG Syngas has been used for power generation since the late 1950's.

The Syngas is suitable as feedstock for heating steam driven turbines or as fuel for gas turbines. GE has confirmed that UCG Syngas is suitable for use in its Frame 6 and Frame 9 Gas Turbines.

The demand for base load and peaking power is not only strong across Australia, but strong in other parts of the world such as China, India, Europe and the US.

*Gas turbine power station*

*GE Frame 6 Gas Turbine Generator*

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# Environmental Performance

**Air emissions from conventional fossil fuel power plants and UCG-IGCC**

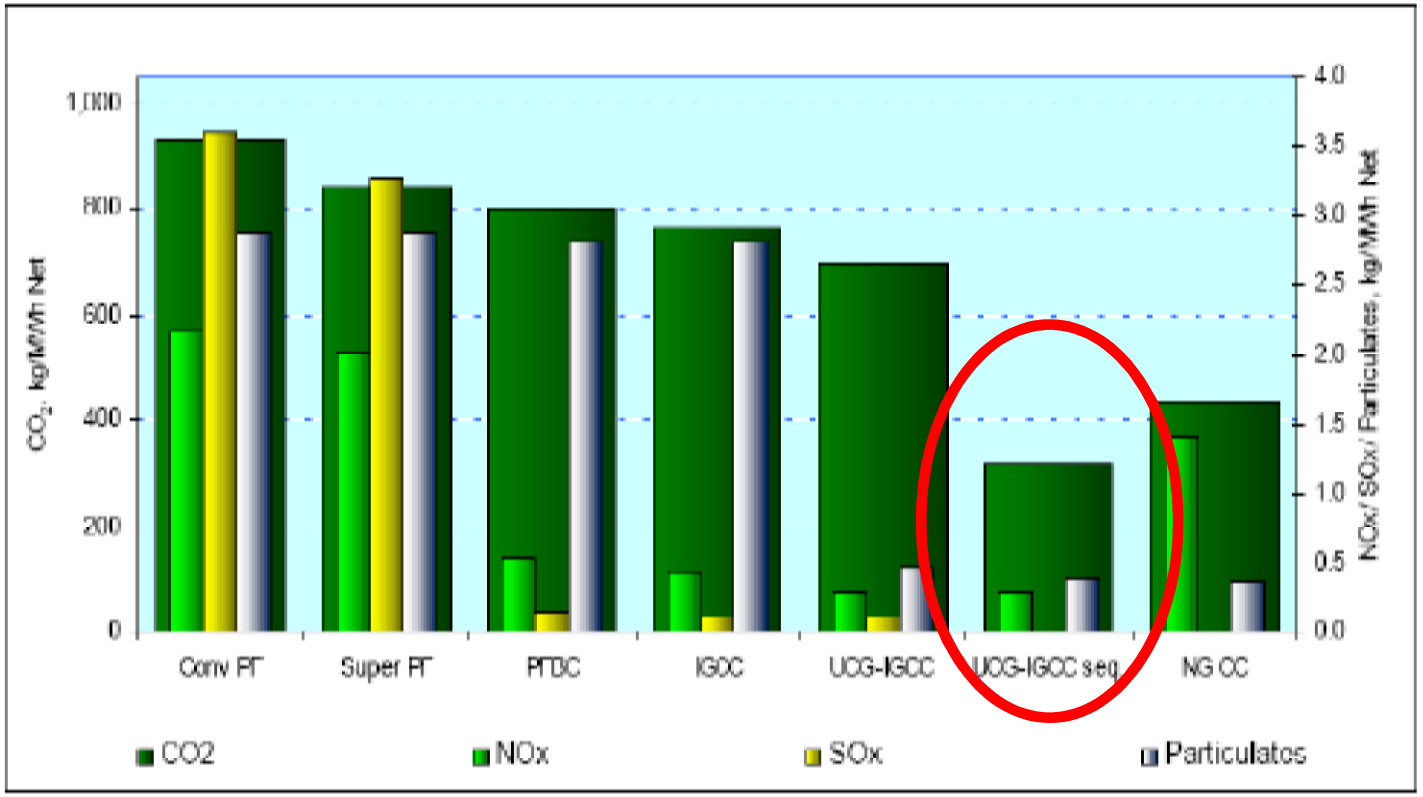


*Figure 3. Air emissions from conventional fossil fuel power plants and UCG-IGCC*

***Source CSIRO and BHP***

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# CGE Coal Resources


***Clean Global Energy's Queensland and Victorian coal tenements approved and/or under application***

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# CGE's Plan for its Australian Operations

## *3 Stage, 36 month Commercialisation Project Plans*

- Construction & commissioning of 1-2 Petajoule enriched air UCG Pilot Plant – (Oxygen will be used to prove up gas quality for GTL)
- Initiate design and engineering to expand pilot plant into a UCG commercial plant with an initial 4-5 Petajoule capacity
- Initiate discussions for potential Syngas off-take Expansion &commercialisation of pilot plant to 4-5 Petajoule enriched air (with Oxygen capabilities) UCG commercial plant
- Supply of UCG Syngas feedstock (power station supply) under off-take agreements
- Initiate discussions with potential JV Partners for Gas To Liquids project
- Initiate international expansion opportunities
- Further exploration/expansion of resource base

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# CGE China Joint Ventures

*CGE entered into a 4 way JV agreement on 30th October 2009 with Guo Xin Mining and others to develop a large scale UCG Plant with an estimated cost of US$400m.*

*CGE is also still progressing talks under a MOU with CECIC in relation to a commercial UCG project.*

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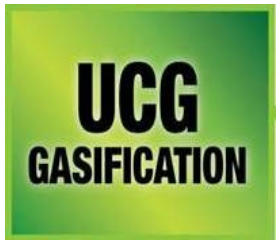
# CGE has put the solution together


Over 3,900km2 of highly prospective coal leases.


Technology Partnership Agreement with Dr. Michael Green, world leading expert in UCG




We have a cost effective, low emissions solution to produce diesel from UCG Syngas and above ground coal gasification.


Projects in Queensland, Victoria and China.

# The CGE Board

**John Harkins**
**Executive Chairman**

Senior Vice President of a US gasification co., former Director of Linc Energy Ltd and CEO of CARE Super, a multi-billion dollar super fund.

**Dr. Michael Green**
**Executive Director**

One of the world's leading UCG specialists, he was the director of the successful European UCG trial in Spain (1992 – 1998) and has 32 years experience in energy related engineering and research.

**Domenic Martino**
**Non-Exec. Director**

Former CEO of Deloittes Australia, Director/Chair of CSG companies Sydney Gas Ltd and Blue Energy Ltd. Current Chair of Australian Resources Ltd, Director of Gladestone Pacific Nickle, Computercorp Ltd &Resourceshouse Ltd.

**Alison Coutts**
**Non-Exec. Director**

25years experience in international engineering, project management, strategy consulting (BCG) and finance.

**Paul Hubbard**
**Non-Exec. Director**

Former senior executive with Woolworths and BHP in Human Resources. Pioneered management courses for BHP and other leading corporations.

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# Here are some of the numbers

***CGE's solution?***

***Simple, low cost, environmentally responsible energy.***

- ✓ **UCG Syngas Cost - *$0.70 - $0.80 per gigajoule**
  **UCG Syngas Selling Price - *$2.50 - $3.00 per gigajoule**

- ✓ **Power Generation Costs - *$11 - $15/Mwh**
  **Power Generation Selling Price - *$35 - $40/Mwh**
  **CAPEX - *$1.2m - $1.5m/Mwh capacity**

- ✓ **Diesel Fuels Cost - *$22 – $25 per barrel**
  **Diesel Fuel Selling Price - *$50 - $60 per barrel**
  **CAPEX - *$27,000 - $35,000 per capacity barrel**

***current costs are in US Dollars and based on current known circumstances and modelling and may be effected by numerous issues in the future.***

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# Benefits of CGE's energy solution

- ✓ Very cost effective
- ✓ UCG and GTL reduce harmful emissions and greenhouse gasses
- ✓ Access to otherwise stranded and un-mineable coal resources
- ✓ The safest form of mining possible
- ✓ Significantly reduced carbon footprint compared to traditional mining
- ✓ Conversion of a low value resource into a highly valuable energy
- ✓ Well proven technologies of UCG and GTL
- ✓ Lowest cost IGCC power production option available
- ✓ A significant supply of inexpensive quality fuels to address peak oil
- ✓ Great potential returns

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## Thank You For Your Attention


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