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Underground Coal Gasification Conference in London 7th February 2007 – Providing a clean energy source of a size matching world energy needs

Last week, London hosted the most significant and extensive conference on Underground Coal Gasification ever held. Over 100 delegates from 19 countries heard speakers from around the globe updating on projects and Technology in China, India, Australia, USA and Europe.

The conference was held at the London headquarters of ABN AMRO and organised by the UCG Partnership, and included major industry players, government and academia. Underground Coal Gasification is a method of converting un-worked coal into a combustible gas, which can be used for industrial heating, power generation or the manufacture of hydrogen, synthetic natural gas or diesel fuel. The gas can be processed to remove its CO₂ content, thereby providing a source of clean energy with minimal greenhouse gas emissions.

World Energy Consumption in 2004* breaks down into 41% from oil, 23% from natural gas, 23% from coal, 6% from nuclear, 4% from hydro and 3% from renewables.

However, world proven reserves 2005** has oil accounting for 19%, gas with 17% and coal with a massive 64%. Add total reserves to total resources and coal accounts for 95% of the fossil fuel energy content of the planet*** – hundreds of years of energy.

Delegates heard that UCG represents a real answer to the energy gap issue since UCG provides security of supply and a low cost clean energy with substantial volume. Russia, Australia, USA, India, China, South Africa and the UK all have projects developed or being developed with plans being made for further studies in Ukraine, Poland, Hungary, Ireland and Pakistan.

The technology of UCG is now ready for scale-up to large projects to produce syngas for power generation and coal to liquids. Security of supply, the potential for CO₂ capture and storage, the lower costs of gas production and its rapid development to fill the energy gap are the principal motivators for the vast increase in activity in UCG.

The conference urged the UCG Partnership, which represents the industry and provides public information on UCG, to continue to urge Governments to provide a workable framework in which UCG projects can flourish and develop quickly. This includes an easier licensing, a simpler environmental and planning framework, risk management and the removal of unnecessary bureaucratic red tape. Encouragement from the very top of Government is needed urgently.

– ENDS –



PRESS RELEASE

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Source

*USEIA, 2005

**BP, 2006

***AAPG and BP

Editor's Notes

There are 33 members from 14 countries since the launch of the Partnership in December 2005, including:

ABN AMRO

Skadden Arps Slate Meagher & Flom (UK) LLP

Tullow Oil plc

Newcastle University

BCG Energy Limited, Montrose, Scotland

British Energy Council/ World Energy Council

BHEL, India

Bioverda, Dublin

Carbon Energy, Australia

China Yinfa International Investment Company Limited, Beijing, China

Coal Authority

Energy Edge Limited

Energy Institute

Energy Wales

E.ON UK plc

Future Energy Yorkshire

IMC Geophysics International Limited

Infinity Fuels, India (Reliance Industries)

In-Situ Energy LLC, USA

George Major

Metex Resources Limited, West Perth, Australia

PT Odira Energy Persada, Jakarta, Indonesia

Petro SA

Red Mountain Energy, Russia

Renewable Energy Foundation

Statoil, Norway

Texyn Sendero Partners LLC, Houston, USA

VP Power Limited, Ireland

Wardell Armstrong
White Coal Energy Limited, Hong Kong
World Coal Institute
Xinao Institute of Technology, China

The UCG Partnership continues to be the centre of excellence for Underground Coal Gasification. Worldwide interest has been generated.

Underground Coal Gasification has proven technology and is commercial. It provides security of supply and produces gas at substantially lower costs than most other processes. It is clean air technology and environmentally friendly. Given the vast coal reserves in the world it has the potential to provide a substantial part of the world's energy requirements now and long into the future.

Exciting developments are taking place in a number of countries including China, India, South Africa, the United Kingdom and the USA with significant interest received from many of the other coal-rich countries.

Underground coal gasification (UCG) is the in-situ conversion of coal into a combustible gas, which can be used for heating, power generation, or the manufacture of chemicals. Coal gasification in integrated combined cycle power generation (IGCC) and carbon capture and storage is the favoured route to zero emission power generation in many countries. The UCG process is fast becoming a practical and commercial alternative to conventional coal gasification offering the same benefits of surface gasification at lower cost. UCG has been stimulated by new drilling and completion technology from the oil and gas industry, demonstrated first in early US trials and later in the European trial in Spain (1992-1998). This trial, supported by the European Commission and the Governments of the United Kingdom, Belgium and Spain, had the objective to extend the technology to deeper seams.

Since the end of the trial, the UK has led the further development of UCG in Europe, first with the DTI initiative to review the feasibility of UCG in the UK (1999-2004), the recent study of UCG in the Firth of Forth (2004-5) and the work of a small number of consultants who are responding to an increasing number of enquiries from around the world. At least one UCG trial, based on UK expertise is underway in China and negotiations over others in the USA, South Africa and India, are underway. Australia, which recently did a UCG trial (1999-2003), is a potential target for UK technology.

The aims and objectives of The UCG Partnership are:

- Focal point for public information on UCG for Governments, press and media generally.
- Definitive source of information to members on all aspects of UCG including technology, research and the latest worldwide developments.

- Establishment of the benefits and issues of UCG as a carbon abatement technology.
- Development of technology training in UCG.
- Annual International conference and specialist workshops as required for members.
- Identification of commercial opportunities for members to participate in UCG ventures around the world, and assistance with the formulation of projects
- The identification of UCG with clean coal technology, good security of supply, low environmental impact, economically advantageous.
- Co-ordination and planning of relevant research in UCG activities and related aspects of CO₂ storage

Dr. Michael Green

Dr. Michael Green is Managing Director of UCG Engineering Ltd and a founder of the UCG Partnership. His Company provides worldwide consultancy services in the field of underground coal gasification to energy and coal companies interested in the development of commercial UCG projects. Prior to this position he worked as an independent consultant to the Department of Trade & Industry in support of the UK initiative on underground coal gasification.

He was the Director of the European trial of underground in-seam gasification in Spain, which ended successfully in mid 1999 with the gasification of a coal seam at 550m depth. He has authored many papers on the subject of UCG and has 32 years experience in energy related engineering research.

Dr Green obtained his PhD in Chemical Engineering from Imperial College, London. He began his working career with what is now Northrop Grumman in New York and moved on to British Gas where he held senior positions in Research and Development.

Rohan Courtney

Rohan Courtney established the UCG Partnership with Dr. Michael Green just one year ago, having previously been Chairman of UC Gas for two years. A banker for 27 years, including eight years as Chief Executive in London of State Bank of New South Wales, he specialised in energy transactions including oil and gas exploration and production businesses in the US and mining businesses in Australia. He has been a non-executive director of Tullow Oil plc since 1993 and was appointed Senior Independent Director in 2000. He is Chairman of the Audit Committee and member of the Remuneration and Nomination Committees. He has involved himself in other businesses and was head of an international media company for five years and a company doctor, also for five years.