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# **ASX Announcement**

27 July 2009

# Carbon Energy (CNX) executes Heads of Agreement to access 338 million tonne inferred Coal Resource in Queensland's Galilee Basin.

Carbon Energy has signed a Heads of Agreement (HoA) with Liberty Resources Limited ASX: LBY ("Liberty") to establish a joint venture to develop Liberty's 338 million tonne thermal coal inferred resource in the Galilee Basin.

Carbon Energy will hold 80% of the Joint Venture and will be the operator.

Carbon Energy will contribute its expertise in Underground Coal Gasification to assess the optimal development of the resource and to execute the following development plan:

- Application for a Mineral Development Licence to undertake a trial
- Design and construct a trial project
- Conduct feasibility studies into the following commercial opportunities: power generation, synthetic natural gas production, chemical production, liquid fuel production; and
- Design and construction of commercial scale underground coal gasification facility

Liberty holds two granted Exploration Permits for Coal ("EPC") and an overlying Mining Development License Application ("MDLA") in the Galilee basin (see attached map) and has assessed these EPCs' to contain a JORC compliant estimate of 338 million tonnes of inferred coal resource. The coal resource is interpreted to remain open in all directions and is expected to increase significantly with exploration drilling.

Liberty will contribute 100% of the EPC's into the joint venture. Liberty will be free carried through the initial assessment and trial phase which will involve some exploration drilling and the establishment of a trial plant capable of producing initially 1 and then 40 PJ per annum of syngas. The two parties will thereafter contribute to the joint venture in proportion to their prorata interest.

Furthermore, Carbon Energy can elect to establish additional 40 PJ per annum Pilots under the Agreement with Liberty. At this stage 4 other Areas of interest have been identified by Liberty.

The development of the Joint Venture project will be subject to additional technical and market feasibility studies together with the appropriate Government approvals, having regard for the

Queensland Government's UCG Policy and the interests of overlapping coal seam gas tenement holders. Currently the policy provides for three UCG operations in Queensland, including Carbon Energy's existing MDL 374 at Bloodwood Creek in the Surat Basin. The Joint Venture will seek to obtain Government approval and negotiate terms with the overlapping tenement holders in order to progress this development. These discussions are anticipated to take approximately 12 months to conclude.

Following approvals and a successful trial it is intended to expand the project to an initial capacity of 40PJ per annum, generating electricity and other products from syngas.

Under the HoA, the JV structure can also be applied to other areas in the Galilee where Liberty currently has five EPC applications pending.

Carbon Energy's Managing Director Mr Andrew Dash said "While this development is at an early stage we view the Galilee Basin area is an attractive growth target for the company principally due to the availability of huge deep coal resources, which are not able to be commercially mined by applying traditional mining techniques".

"More significantly the Galilee Basin has been identified by many companies as the next major energy province in Queensland. The Liberty held tenements are in close proximity to recently announced resource projects. Such projects will create the need for additional infrastructure such as road, rail and port facilities which, once in place, will open up domestic market opportunities for electricity, synthetic natural gas and chemical feedstock."

"This agreement is consistent with Carbon Energy's strategy to obtain equity interests in additional coal deposits by leveraging off our leadership position in Underground Coal Gasification technology."

Application of Carbon Energy's leading underground coal gasification technology has the potential to monetise these large, otherwise stranded coal resources in the Galilee Basin and provide the basis for the development of a world scale energy province in central Queensland.

For and on behalf of the Board

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Andrew Dash Managing Director

# **Competent Person Statement**

The information in this statement that relates to in situ coal resources is based on information compiled by GeoConsult and reviewed by Warwick Smyth, who is a member of the Australasian Institute of Mining and Metallurgy (CP) Geology; and the Australian Institute of Geoscientists. Warwick Smyth is a qualified geologist (BSc Geol, Grad Dip AF&I, MAusIMM (CP), MGSA, MAIG), and a Principal Consultant for GeoConsult Pty. Ltd. and has over 17 years experience which is relevant to the style of mineralisation, the type of deposit under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined by the 2004 edition of the Australia Code for Reporting of Coal Resources. Warwick Smyth consents in writing to the inclusion in the statement of the matters based on his information in the form and context in which it appears

# About Carbon Energy

Carbon Energy's purpose is to produce clean energy and chemicals feedstock from Underground Coal Gasification (UCG) syngas.

Carbon Energy's unique approach to UCG and syngas provides a low cost option for capturing CO2, making it a leader in clean coal technology.

Carbon Energy's goal is for syngas to become the preferred feedstock for producing clean coal power stations, an alternative to oil-based fuel, agribusiness products (fertilisers and explosives), polyolefin products (such as plastics) and allowing for economic carbon capture.

Carbon Energy's technological advantage comes from its association with CSIRO including world class geotechnical, hydrological and gasification modelling capabilities.

# About Underground Coal Gasification

Underground Coal Gasification heats the coal underground and converts it into synthetic gas (syngas), which is then brought to the surface where it can be used for electricity production or converted to liquid form to produce a variety of fuels.

This is achieved by injecting oxidising gases, such as oxygen, steam or air down a borehole into a gasification chamber in the coal. Chemical reactions convert the goal into gas, and the UCG syngas is extracted through another borehole. The gas is cleaned on the surface and processed for its specific use at that site.

# About Liberty Resources

Liberty is working towards supplying affordable gas and power, and at the same time offering a unique opportunity to reduce Australia's level of  $CO_2$  emissions.

Liberty has extensive tenements including those with coal at depths greater then 700m below the surface. Gasification (steaming) of deep coal seams create deep chambers suitable for storing  $CO_2$ . At depth  $CO_2$  becomes a liquid - held securely by the Earth's pressure.

To create these chambers, Liberty intends to gasify the deep coal resource produced in syngas.

Gasification (steaming) of coal can only successfully take place in a secure, geologically sealed chamber. The Syngas is composed predominately of Methane, Ethane, Hydrogen and  $CO_2$  of gases that can be used to generate low cost power and electricity with virtually no  $CO_2$  emissions.

The CO<sub>2</sub> from the Syngas and electricity generation can be captured and returned safely into the deep, underground chambers.

# About Galilee Assets

The initial joint venture under the heads of agreement cover 717.5km2 of ground in the Galilee Basin on two tenements, EPC 1340 and 1326. Overlying these tenements is a Mineral Development License Application (MDLA 408). These areas contain an Inferred Resource of 338Mt of thermal coal (as announced in December 2008). The coal resource remains open in all directions and is expected to increase significantly with exploration drilling.



Subject to regulatory approval, under the Heads of Agreement, Carbon may enter into further joint ventures with Liberty for the development of UCG production facilities producing 40PJ per annum of syngas from areas within Liberty's other Galilee coal tenements.