Carbon Energy

Introduction to Carbon Energy & UCG-EOR Opportunities

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Important Statements

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Competent Person

The information in this presentation (where it relates to resources) is based on information compiled by Dr C. W. Mallett, Executive Director Carbon Energy Limited who is a member of the Australian Institute of Mining and Metallurgy. Dr Mallett has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Dr Mallett consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

The reserve estimates used in this document were compiled by Mr Timothy Hower of MHA Petroleum Consultants, Colorado, USA, a qualified person under ASX Listing Rule 5.11. Mr Hower has consented to the use of the reserve information contained within this document in the form and context in which it appears.
Agenda

• About Carbon Energy
• What we do
• International Projects
• Wyoming Project
• UCG-EOR Opportunities
Carbon Energy is...

• Building a global energy company
• Converting solid coal into gas (syngas), underground - (UCG)
• Producing low-cost energy
• Reducing emissions
• Preserving groundwater quality
• Generating multiple uses for syngas – e.g. power generation, ammonia production, and synthetic natural gas (SNG) projects
• Carbon Energy is building an international portfolio of coal assets suitable for the application of UCG and accessible to high-value markets using the following strategy:
  - Resource Availability
  - Superior Technology
  - Ready Access to Key Markets
Carbon Energy (ASX: CNX) (OTCQX: CNXAY)

Strategic Focus

“To produce cleaner energy and chemical feedstock from UCG syngas”

Shares on issue 698.5 million
Market Capitalisation: $160.7 million (@ $0.23 share price)
Admitted to S&P/ASX 300 Index September 2008
  – S&P/ASX Energy Index
  – S&P/ASX Oil and Gas Explorers Index
Quoted OTCQX June 2011

Major Corporate and Institutional Shareholders
  - Corporate (Incitec Pivot Limited) 10%
  - Pacific Road Resources Fund 9%
  - Pacific Road Investor 4%
  - CSIRO 4%
Carbon Energy’s UCG Design

Controlled in-panel reaction

Utilising deep coal

Produces energy-rich gas (syngas)
Current Projects

- Montana / Nth Dakota, USA
- Wyoming, USA
- Amasra, Turkey
- Queensland, Australia
- Mulpun, Chile
Queensland, Australia

Exploration Permits for Coal over 2,000 km²

668 Million tonnes (450 Million tonnes Inferred and 218 Million tonnes Indicated with 2 metre cut-off) of JORC compliant coal resource

GROSS GAS VOLUMES (PJ)

1P Reserve (Proven) 11.0
2P Reserve (Proven + Probable) 743.9
3P Reserve (Proven + Probable + Possible) 1,042.8

Short-term commercialization

• Power Generation into National Electricity Market
• Synthetic Natural Gas

Medium-term commercialization

• Chemicals (e.g. ammonia)
• Liquid fuels
Bloodwood Creek Project
Queensland, Australia

5MW Power Station
Phase 1 Power Generation
• Commissioning of Panel 2
• Commissioning of Gas Engines
• Electricity generation to power our site
• Connection into local electricity grid
• Commissioning of Panel 3

25MW Power Station
Phase 2 Power Generation
• Development Agreement already in place with Arcadia Energy Trading
• Power Purchase Agreement under negotiation
• Project planning already commenced

Aerial Photo of 5MW Power Station & 25MW Power Station site
Bloodwood Creek, Queensland.
Power Generation
Blue Gum Energy Park

Phase 3

1. Central gas processing and Gas Power-Station
2. Ammonia Plant
3. Chemical Plant
4. Transport Fuel manufacture
5. Synthetic Natural Gas manufacture
6. Commercial and Administration Facilities
7. Carbon Energy's existing UCG facility (Bloodwood Creek)
Chile – Mulpun Project

- Agreement with Antofagasta Minerals S.A. to jointly assess and develop a coal deposit in Mulpun (near Valdivia)
- Located in southern central Chile, 800km south of Santiago
- Focusing on Power Generation
  - Chilean electricity demand growing by 8% annually
  - Currently reliant on imported coal, LNG and Diesel

Key Phase 1 Deliverables Achieved

- Hydrological Model development
- Site selection for the Pilot Project
- Environmental Approval for the Pilot Project

Site works for the first UCG Panel in Chile are progressing well and water monitoring wells are currently being drilled.
Carbon Energy’s Acquisitions

• April 2011: Carbon Energy acquired Clean Coal Inc. and Clean Coal Amasra Limited, transforming the Company into a truly international energy business.

• Additional Resource – Key Development Milestone: a total of 1,500 million tonnes of Inferred resources and 300 million tonnes Indicated resource across 3 locations:
  – Wyoming, USA
  – Montana / North Dakota, USA
  – Amasra, Turkey

• Access to higher priced energy markets

• Diversified market and regulatory risk

• Key relationships with strategic partners: Anadarko, Great Northern Properties & Hema

• Access to additional revenue stream from sale of CO₂ for Enhanced Oil Recovery
Wyoming, United States

Project Outline

• Exploration License with Option to Lease Agreement with Anadarko Land Corporation
• Contract includes Off-Take Agreement for CO$_2$ for use in Enhanced Oil Recovery - generating additional revenue stream
• Key Development Milestone:
  • 500 million tonnes Inferred Coal Resource
  • 100 million tonnes Indicated Coal Resource
• Planned production of electricity, synthetic natural gas (SNG) and CO$_2$ for Enhanced Oil Recovery (EOR)
• 500 million tonnes of coal resource can support gas production of 5,000PJ which can generate $1.8 billion each year for 15 years (@$5.50/GJ)
• Established UCG Regulatory Framework exists in Wyoming

* Sources: NYMEX, FERC, AEMO and Carbon Energy analysis
Wyoming, United States

Exploration Target Area

- Located in southern Wyoming
- Access to Anadarko coal resources across 44 square miles
- Close to I-80 and existing natural gas, electricity and CO\textsubscript{2} pipeline infrastructure
Syngas & CO$_2$ Product Opportunities

- **Synthetic Natural Gas**
- **Ammonia**
- **Low Emission Power**
- **Liquid Fuels**

Syngas clean-up

- **Sulfur**
- **CO$_2$**

**Enhanced Oil Recovery**
UCG-EOR Opportunities

- **Minimal surface footprint** by extracting the energy from coal through a series of boreholes.
- **Maximum resource efficiency** as UCG produces up to 20 times the energy from the same coal resource compared with coal bed methane (CBM).
- **Cutting carbon emissions** by producing energy from UCG syngas and supplying the CO\(_2\) by-product for use in EOR.

**UCG-EOR means the production of clean energy from coal with a low environmental footprint and commercially-attractive Carbon Capture & Storage**
Wyoming Project

✓ Resource assessment has been undertaken

✓ Exploration planning is underway

✓ Discussions with key regulators and stakeholders are progressing to facilitate UCG permitting activities

☑ Interested to visit with other energy organizations operating in the State

☑ In the next 12 months we will be looking to initiate discussions with Companies in the EOR industry and potential Commercial Partners
Thank You

Carbon Energy

*Low-cost, low-emission energy has arrived*

Peter Swaddle – Senior VP Strategy & Business Development