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15 February 2011

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**RE: Carbon Energy Limited – Investor Presentation**

Carbon Energy Limited (ASX Code: CNX) is pleased to provide a copy of the current Investor Presentation.

Yours Faithfully



Prem Nair  
CFO & Company Secretary





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# Carbon Energy

*Low cost, low emission energy has arrived*

## Investor Presentation

Andrew Dash Managing Director

February 2011



# 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.



# Carbon Energy (CNX)

## Strategic Focus

***“To produce clean energy and chemical feedstock from UCG syngas”***

Shares on issue 670 million

Highly liquid with 60% annual turnover

Market Capitalisation: \$268 million (@ \$0.40ps)

Admitted to S&P/ASX 300 Index September 2008

- S&P/ASX Energy Index
- S&P/ASX Oil and Gas Explorers Index

Major Corporate and Institutional Shareholders

- Corporate (Incitec Pivot Limited) 10%
- Institutional 9%
- Pacific Road Resources Fund 9%
- Pacific Road Investor 4.9 %
- CSIRO 4%



## Carbon Energy is...

- Building a global energy company
- Accessing deep “stranded” coal assets
- Converting solid coal into gas (syngas), underground - (UCG)
- Producing low-cost energy with lower emissions
- Generating multiple uses for syngas - e.g. power generation, fertiliser production and gas-to-liquids (GTL) projects



## Market Opportunity

**Tonnage**  **Syngas**  **Revenue**

- From 30 million tonnes of deep coal, UCG will recover > 300 PJ energy
- 300 PJ will sustain a 20 PJ p.a. production rate for 15 years, sufficient for any of:
  - 300MW Power Station
  - World-scale Ammonia Plant
  - Synthetic Natural Gas Plant
- 20 PJ p.a. will generate:
  - \$70 million p.a. for 15 years @ \$3.50/GJ
  - \$110 million p.a. for 15 years @ \$5.50/GJ
  - \$150 million p.a. for 15 years @ \$7.50/GJ

**100 Mt supports 3 world-scale projects generating \$210M to \$450M p.a.**

# What are the global opportunities ?

- Coal fuels approximately 80% of power generation in Australia and over 40% globally.
- Energy demand is increasing worldwide and energy security will continue to be of increasing importance.
- The International Energy Agency forecast that coal will maintain its position as the leading source of power generation globally for at least the next 25 years.
- It is estimated that 85% of the world's 6 trillion tonnes of coal reserves are unrecoverable through conventional mining techniques but may be potentially accessible via UCG.

*The World Energy Council estimates UCG could potentially increase global coal reserves by as much as 600 billion tonnes.*



# Criteria for Projects

## Resource

- Suitable for Carbon Energy's UCG Technology
- Target 100 Mt – 500 Mt per deposit

## Market

- Located close to market or accessible to market via nearby infrastructure
- Sufficient market demand for UCG syngas products (e.g. power, chemicals, liquid fuels) at attractive prices

## Regulatory Framework

- Defined regulatory pathway for UCG projects or the prospect of a pathway in a reasonable timeframe

## Counterparty

- Strong counterpart that brings additional capability to projects (e.g. coal, capital, access to markets)

## Commercial Terms

- Carbon Energy earns an equity interest in the resource
- Carbon Energy's IP is protected
- Fair and equitable value to each party
- Little or no restriction to Carbon Energy's other interests



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- ★ Existing Projects
- ★ Active Targets
- ★ Opportunistic Targets

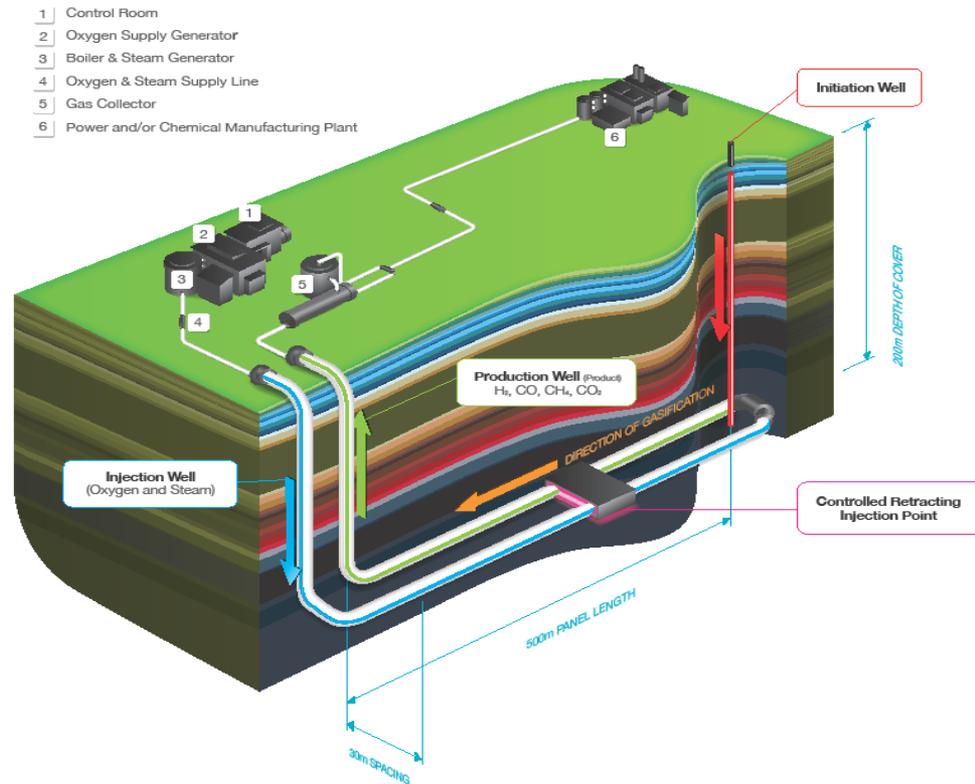


# Carbon Energy Unique - UCG Design

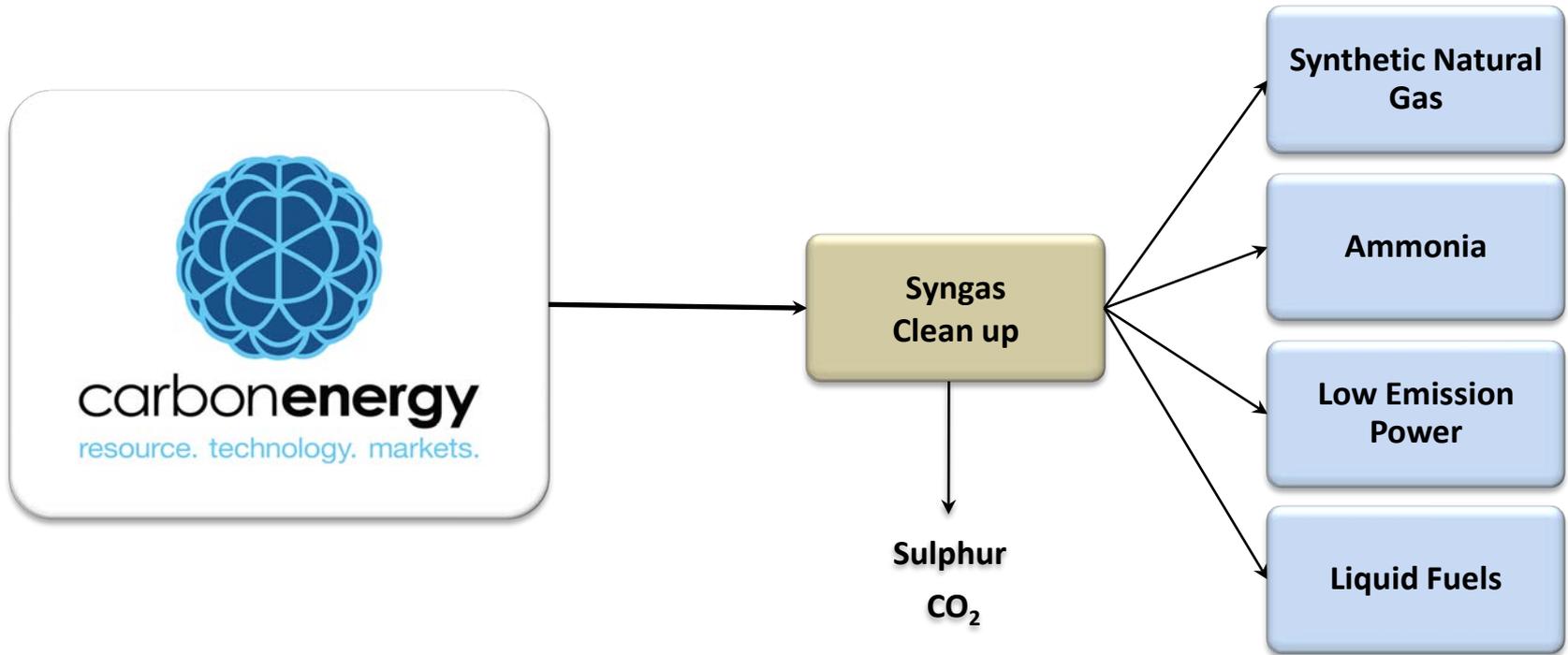
Controlled  
in-panel  
reaction

Utilising  
deep coal

Produces  
energy-rich  
Gas (syngas)



# Syngas Product Opportunities

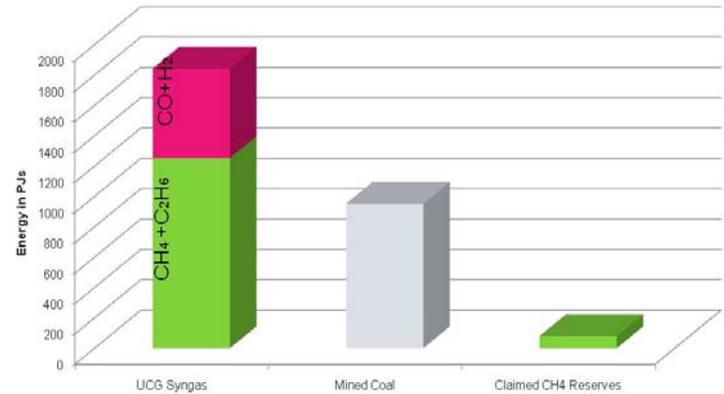




# 4 Key Advantages of UCG



**1. Low impact environmental footprint**

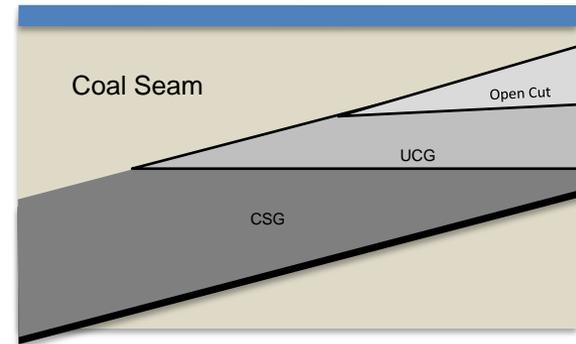


**2. Energy generated from a small area**

<b>Above-ground Gasification Process</b>	Mine Coal	Process Coal	Transport	Gasification Produces Syngas	Co2 Removal & Storage	Power Generation
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<b>Underground Gasification Produces Syngas</b>	Co2 Removal & Storage	Power Generation
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**3. Less steps to carbon capture for low emission coal process**

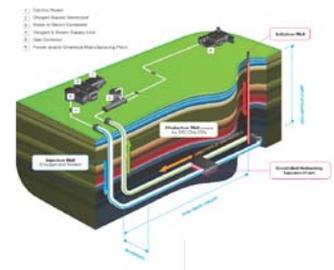


**4. Monetising deep coal – better resource utilisation**



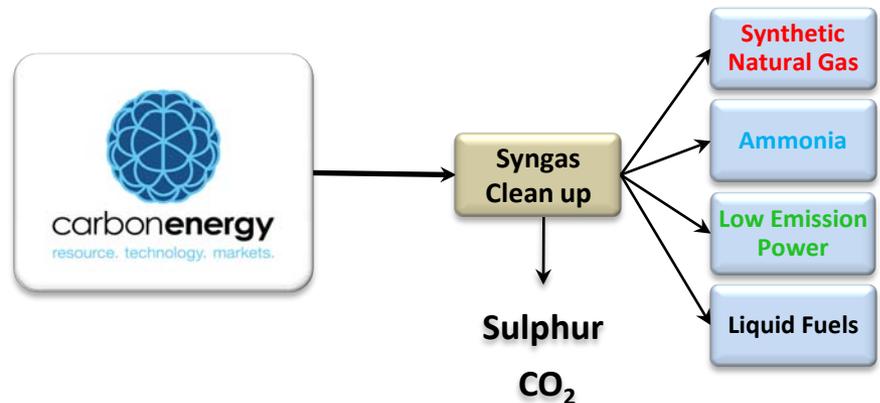
# Producing energy with a lower impact

- Significant environmental advantages – low surface impact and small footprint
- **Produces 20 times the energy from the same area compared with coal seam gas**
- Electricity generated using UCG syngas produces 10-20% lower CO<sub>2</sub> emissions than conventional coal-fired power plants
- Increased efficiency in capture and storage of CO<sub>2</sub>
- Process is groundwater neutral



# Technology - Progress

- Concept Study into the production of alternative downstream products utilising syngas for:
  - Ammonia
  - Synthetic Natural Gas (SNG)
  - Power
- Study commissioned in conjunction with Incitec Pivot Limited and conducted by internationally recognised consultancy, Ammonia Casale.
- Findings concluded that syngas has the potential to reduce the capital costs of producing ammonia and pipeline quality gas (synthetic natural gas) which can be produced at market competitive rates.



# Current Domestic Operations – Kogan, QLD

## 5MW Power Station (Phase 1)

- Commissioning of Panel 2
- Commissioning of Gas Engines
- Electricity Generation – power our site
- Electricity connection into local Grid
- Mid year commissioning of Panel 3

## 25MW Power Station (Phase 2)

- Development Agreement already in place with Arcadia Energy Trading
- Power Purchase Agreement under negotiation
- Project planning already commenced





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# 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)



# Queensland Update

- 668 Mt (450 Mt Inferred and 218 Mt Indicated with 2m cut-off) of JORC compliant coal resource
- 3P Reserve (Proven + Probable + Possible) Gas Volumes = 1,042.8 PJ
- Queensland Government issued amended Environmental Approval 11 Feb
- Carbon Energy expects the following work schedule:

## **Mid February – Mid March 2011**

- Installation of additional monitoring wells

## **Mid March – Mid April 2011**

- Initiation and commissioning of UCG Panel 2
- Establishment of consistent syngas flow

## **Mid April – End May 2011**

- Introduce syngas to engines and conduct engine testing
- Finalise environmental amendments to ramp up to full production
- Commission engines and ramp up power production

## **June 2011**

- Export of electricity to the grid

## 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% p.a.
  - Currently reliant on imported coal, LNG and Diesel





## Chile Update

- Environmental Approval Obtained for Pilot Project
- Preliminary Design Plan Completed
- FEED contract awarded December 2010 – due for completion May 2011
- Orders Placed for UCG Panel Casing
- Seismic Study Completed – confirmation boreholes in progress
- Water Monitoring Wells – commencing soon
- Drilling Plan Completed and Tender Document being Prepared
  - Drilling targeted to commence June/July 2011



# Next 12 Months

## Queensland

- Commission UCG Panel 2
- Commission 5MW Power Station
- Commission UCG Panel 3

## Chile

- Complete Construction of Panel 1
- Commence Gasification
- Complete Resource Assessment

## International

- Continue to pursue opportunities in:
  - North America
  - Europe
  - Asia



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# Thank You

## Carbon Energy

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Andrew Dash Managing Director