

#### **ASX Announcement**

30 November 2015

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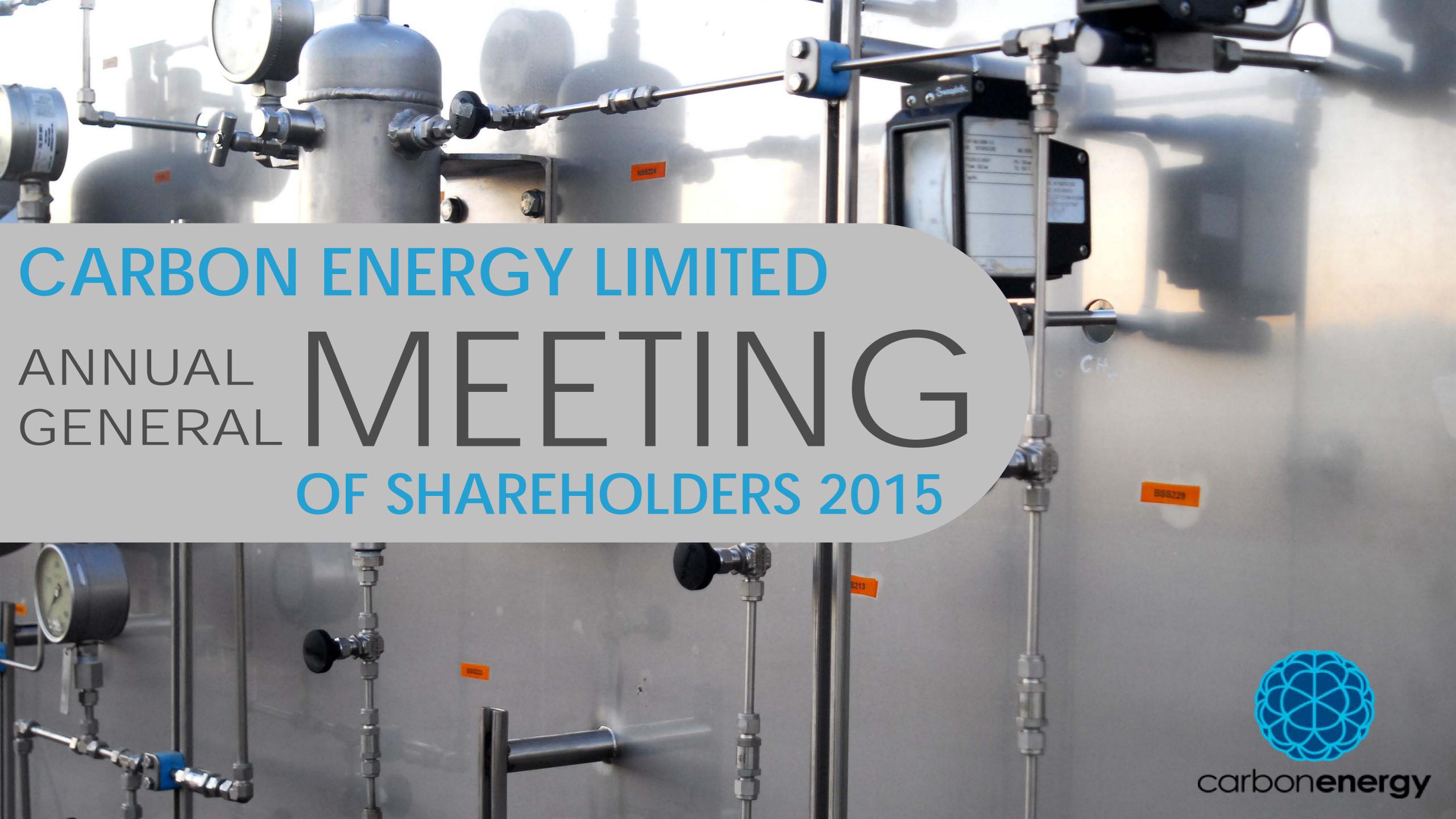
#### Annual General Meeting – 30 November 2015 Chairman's Address & Managing Director's Presentation

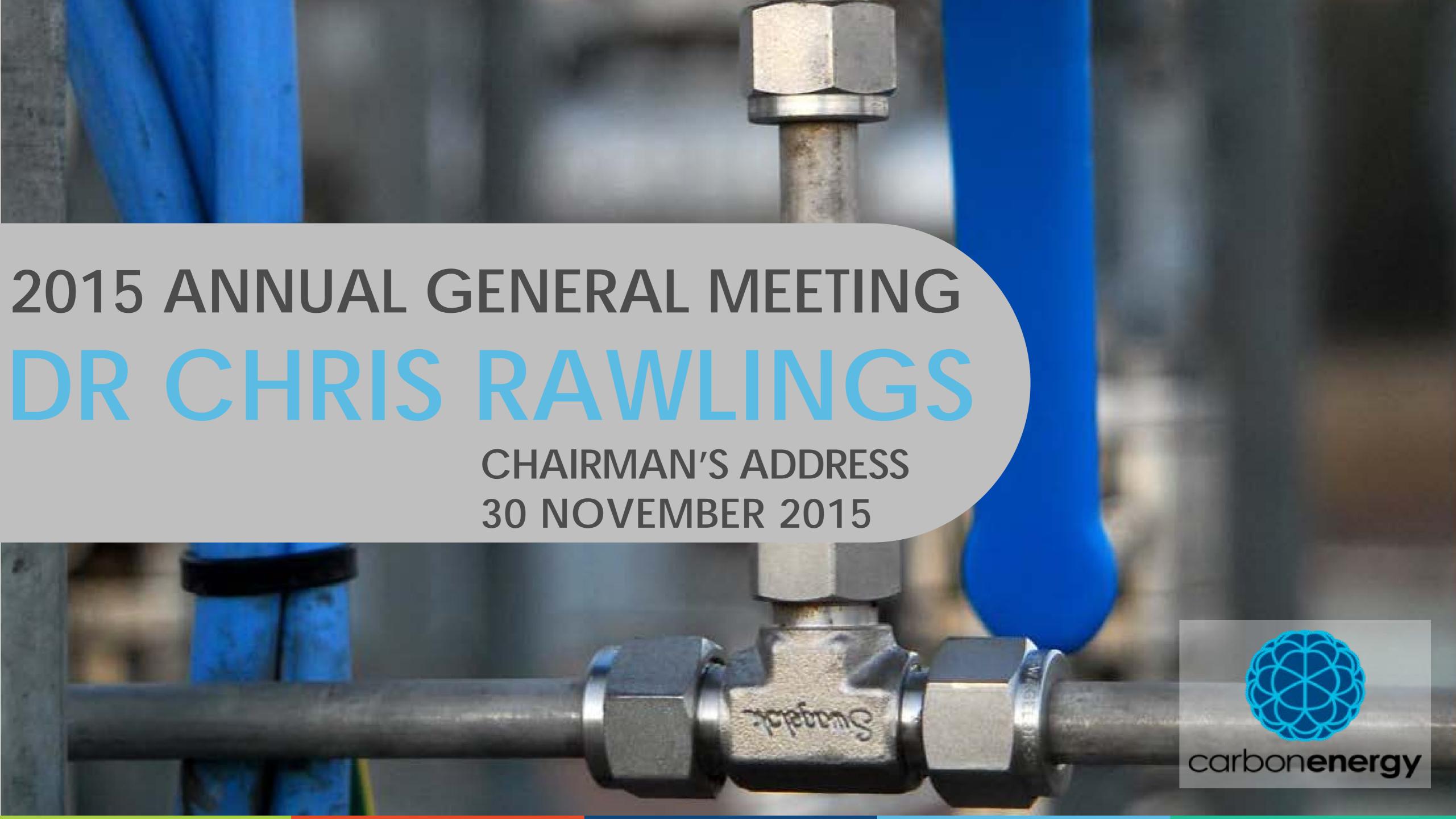
**Carbon Energy** (ASX:CNX, OTCQX: CNXAY) will present the attached Chairman's Address and Managing Director's Presentation at the Annual General Meeting of Shareholders being held this morning at the HopgoodGanim Lawyers, Level 7, Waterfront Place, 1 Eagle Street, Brisbane, Queensland.

The meeting will commence at 09:30 AEST.

#### **ENDS**

For and on behalf of the Board







### Carbon Energy 2015 AGM Chairman's address to shareholders

Ladies and gentlemen, fellow shareholders:

Good morning and welcome to the 2015 Annual General Meeting of Carbon Energy.

My name is Chris Rawlings and as your Chairman, I would like to address you this morning on the strategy your company has been pursuing and its future plans.

As a quorum is present, I now declare the meeting open. The Notice of Meeting was distributed to members on 30 October 2015 and is taken as read.

The Agenda for this meeting will commence with my opening address. We will then proceed with the formal business of the meeting. On closing the meeting, the Managing Director and CEO, Mr Morné Engelbrecht, will provide an operational update on the progress the Company has made in the 2015 financial year.

I would firstly like to acknowledge the most recent addition to your Board. It is my pleasure to welcome Mr Zhuang Huihai, from Beijing as a Director of Carbon Energy. Mr Zhuang has extensive experience in maximising the value of companies, he's owned. He also brings exceptional business knowledge and relationship building skills across business and government in China. This inclusion of Mr Zhuang on the Board signals a recognition that to do business with, and in, China, Australian companies must encourage Chinese direct investment and participation in the Governance of the Company. I will expand on our aspirations in China shortly.

In addition to Mr Zhuang, your other Directors are; to my left Helen Garnett, Peter Hogan, Louis Rozman and your Chief Executive Officer, Morné Engelbrecht.

Also joining us today are Catherine Costello, your Company Secretary and Chief Financial Officer. The other members of the Executive team are Dr. Cliff Mallett – Technical Director, and Terry Moore – General Manager Operations.

Mr. Stephen Stavrou, representing our Auditor Deloitte, is here today to answer questions relating to the conduct of the Annual Audit. Ms. Michelle Eastwell is also here today on behalf of HopgoodGanim Lawyers, the Company's corporate lawyers

who also graciously provided us with the conference facilities we are using today. Thank you.

#### Focusing on the Fundamentals

The financial year of 2015 has again been both rewarding and frustrating for your Company. In the first half of the year Carbon Energy and its team completed the scientific review for the Queensland Government's Independent Scientific Review of Underground Coal Seam Gasification (UCG).

The review answered all of the questions put by the Independent Scientific Review Panel and demonstrated that your Company's technology for UCG was practical, scientifically rigorous and environmentally responsible.

There was a reasonable expectation that once the final stage of the five year long review process was completed and the proof of keyseam's environmental credentials demonstrated, then Queensland Government approval for the use of your Company's technology would follow.

It is now eleven months since the Government advised the Company it had completed its review of the submitted environmental reports. Whilst we remain in regular communication with the Government, a policy for the future of use of keyseam technology is still being decided. Whilst this process advances, your Company continues to work openly and transparently with the Queensland Government in the pursuit of a successful outcome for your Company's Blue Gum project in Queensland.

This includes providing the State with alternative mid-scale project options to help us monestise our Queensland investment sooner.

#### The Market for Alternative Gas Supply

The global energy market also presents an opportunity for our keyseam technology, particularly with the current economic circumstances. Low international prices for gas, brought about by low oil prices and a number of LNG projects coming into production, have increased the economic pressure on any further development of large gas projects.

The reduced investment in new coal mining operations has seen an increase in the number of stranded coal deposits, which may be economically suitable only for underground coal gasification.

The poor environmental health of the atmosphere, in some rapidly developing economies is creating a demand for new technologies to both satisfy their energy needs and exploit their abundant undeveloped coal deposits, particularly for local gas supply for industrial and domestic use, especially in China and India.

It is understood that new technologies will experience long adoption life-cycles as they attempt the leap from innovation and into the mainstream. While your Board's focus is always on achieving long term shareholder value, the immediate necessity is to demonstrate and commercialise our keyseam technology. This fundamental need, somewhat dwarfs the impact of energy market forces, until we can demonstrate a successful, commercial project. Executing this has been our priority goal. Completing a technically and commercially successful project will be the watershed for sustained future growth.

#### China

The growth of energy demand and the acute need to reduce pollution from surface burning of coal are seen as opportunities for developing a successful UCG project in China.

The Chinese economy is almost 25 times the size it was 25 years ago and over the next decade 170 million rural Chinese will move to an urban environment. China now consumes approximately 23% of all energy consumed in the world. Even despite the nation's "slow down" to an estimated 6.5% annual growth over the next 5 years, China's per capita energy consumption will be one third of the United States. In short, China's energy demand is set to increase heavily over the next two decades as the country lifts its standards of living.

With the China and the world's hunger for energy growing, unlocking new energy sources that are commercially and environmentally sustainable, and, are potentially amenable to carbon capture techniques, is a priority. Coal is predicted to remain a significant source of energy for the world given its widespread availability and low cost. keyseam is able to maximise the energy extracted through syngas from coal, while ensuring a small environmental impact and footprint. Despite the potential for UCG in China your company's, initial forays have not yet successfully established a commercial project.

The lessons learnt have led to the definition of a number of reasons why a successful commercial venture in China has not been realised.

1. UCG was not an energy priority for the Central Government and was not yet a priority in the national 5 Year Plan;

- 2. Without Central Government oversight and approval, international investment in projects in China have a very tortuous path to success;
- 3. The level of technological commitment required for Carbon Energy's UCG was not well enough understood, by Chinese counterparties;
- 4. Chinese partners had to have financial exposure to a successful project, either directly by investment, and, or as part of energy supply in a vertically integrated project;
- 5. Chinese partners had to have access to and experience with Government processes and regulations to enable the requisite approval path to be successfully traversed:
- 6. Chinese partners needed to commit sufficient financial resources to ensure the technological contribution from Carbon Energy had sufficient financial support to become a commercial success.

Experience of Australian companies doing business in China has been very challenging and can involve a number of false starts. Regrettably, that can be part of the learning experience. Our experience to date has caused us to be more circumspect about our choice of Chinese partners and more cautious about our expectations and progress.

It is clear that a successful foreign investment in China needs to have national Government acceptance, regional and local Government support and capable private investment partners.

China is currently offering a supportive regulatory framework for UCG and is actively pursuing UCG technologies to promote cleaner coal technologies in its next Five Year Plan, which commences in March 2016.

This decision recognises the significance coal continues to play in providing low cost energy and at the same time matches China's strategic imperative to look for cleaner alternatives to traditional coal mining and consumption.

Additionally your Company has been focusing some of our business development efforts on downstream industrial users looking to reduce input costs of their manufacturing feedstocks.

It is in this environment of greater knowledge and strategic definition, that I welcome, on your behalf, the Kam Lung Company and the owner of Kam Lung, Mr Zhuang as an investor in, and Director of, Carbon Energy.

Your Company recognises the importance to have an active local partner and an investor who can navigate business practices and cultural nuances, as well as establish relationships with the various levels of Government and business in China.

#### **The JinHong Joint Venture**

As part of your Notice of Meeting you have been requested to approve a Joint Venture, which has the exclusive focus on commercialising keyseam technology and establishing a vertically integrated gas business across China.

Your Board believes that the Chinese partner in the JinHong joint venture (JV), a company controlled by Mr Zhuang, has the necessary experience to assist Carbon Energy to introduce keyseam into the China gas supply industry.

Your approval of the JV will introduce a transformational shift for your Company and acknowledges a long term future into non-Australian markets.

Carbon Energy's contribution to the JV is initially a non-exclusive license that becomes exclusive upon successful commissioning of the JV's first commercial Demonstration Project.

What this means is that the JV is motivated to commence its first joint commercial project and additionally Carbon Energy can continue to close its on going business development activity and maintain 90-100% of technical fees earned during the non-exclusive license period.

JinHong's contribution to the JV will be US\$30 million over 3 years and is approximately double the estimated capital required to commercialise a Demonstration Project.

Carbon Energy thus avoids incurring the capital costs it might otherwise have needed to raise to commence a project in China. Raising the capital for a Chinese project has been challenging, particularly at this stage of the Company's life.

#### **Climate Change Energy Balance**

The world's growing population continues to demand availability of low cost energy coupled with the call to minimise atmospheric pollution. Fossil fuels currently provide more than 80 percent of the world's primary energy needs and are expected to be a major source of energy for decades to come. The objective is to improve energy efficiency and reduce emissions from the production and use of fossil fuels.

keyseam remains an effective and cleaner way to develop syngas. Its role in accessing stranded coal reserves and unlocking new sources of energy is an extremely relevant solution in today's energy mix. The technology negates the need for capital intensive coal mines, coal processing and coal transport and can provide the energy from the coal to a nearby market.

The Board is thankful for the hard working, tenacious team that continue to have faith to drive the commercialisation of keyseam, despite long-term frustrations with approval processes. The tenacity demonstrated by Morné Engelbrecht and his Management team to traverse the tortuous path to commercialisation is a testament to their desire to create value for shareholders.

On behalf of the Board and Management team, we would like to sincerely thank all our employees and contractors for their hard work.

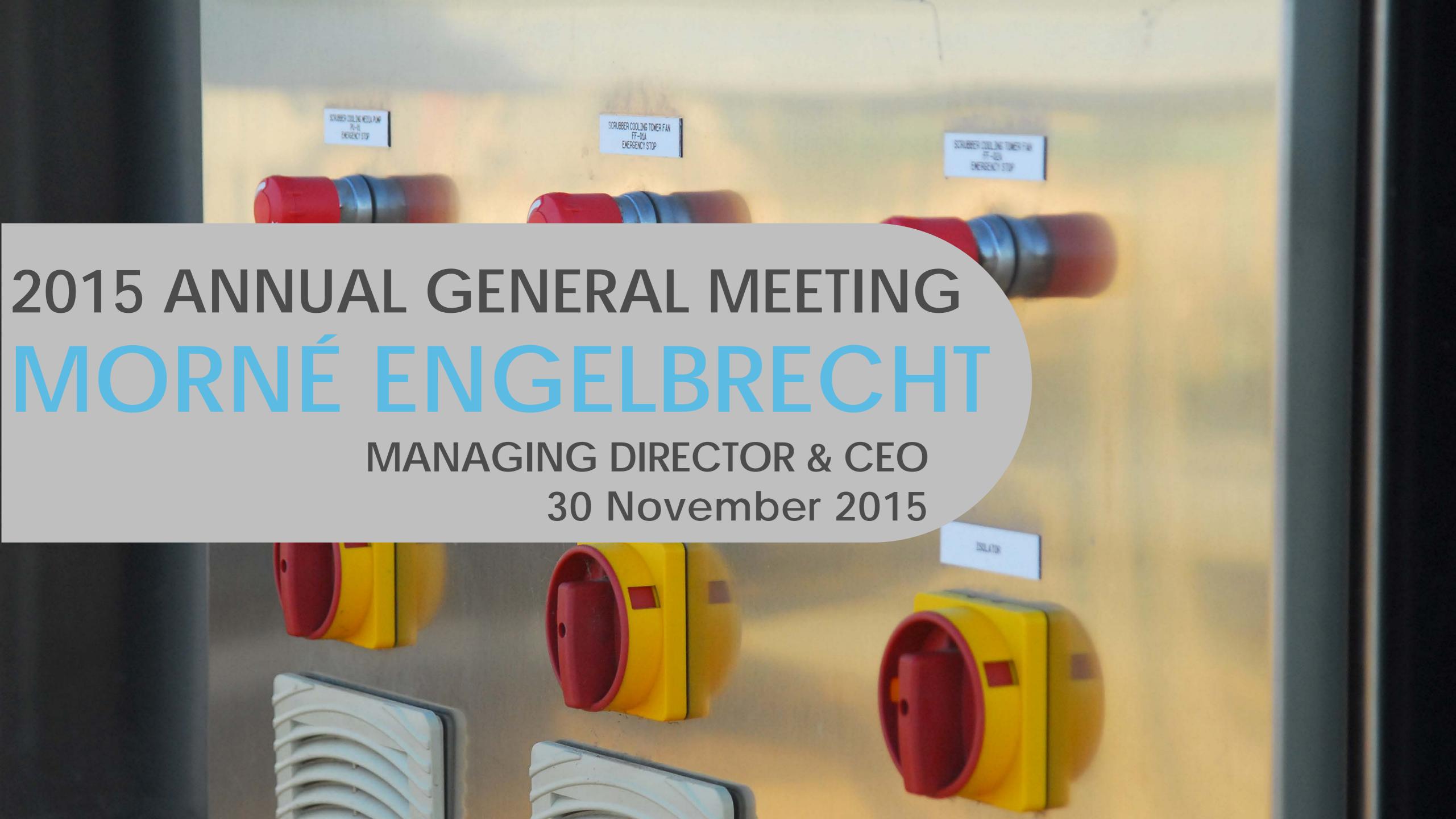
I'd like to take a moment to reiterate our commitment to the protection of the environment and our people. We are proud to say that over the last year, we recorded no environmental incidents.

The safety of our employees, contractors and all those involved in our business is also of paramount importance. During the year, we experienced no lost-time injuries or reportable incidents.

Finally, I would like to thank you, our shareholders, for your continued support and ongoing faith in the business. We are still in the process of developing this company and building a business based on keyseam technology. On behalf of the Board and Company, we are sincerely grateful for your ongoing support.

We are excited about the future and working successfully in China. I look forward to delivering you real value in the years ahead by further developing Carbon Energy into a strong company on your behalf.

Dr Chris Rawlings Chairman



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All Reserve and Resource estimates (Estimates) in this document are reported in accordance with the requirements of ASX Listing Rules 5.25 to 5.28. It is noted in particular that:

This document refers to Estimates reported on 19 September 2014 and released to the market on 22 September 2014 (Updated Reserves Statement);

All Estimates are based on the deterministic method for estimation of petroleum resources at the field and project levels and are attributable to the gross (100 percent) ownership interest of Carbon Energy in certain coal properties located in MDL374, EPC867, EPC869 and EPC1132 located in the Surat Basin of Queensland, Australia;

All Estimates are reported using the following conversion factors as relevant:

- •UCG Energy conversion factor is 16.73 GJ of syngas per tonne of coal gasified;
- •UCG syngas to Synthetic Natural Gas (SNG) conversion factor is 38.5 to 25;
- •1,055 Petajoule (PJ) = 1 Trillion cubic feet (Tcf); and
- •1 barrel of oil equivalent (boe) = 6,000 cubic feet.

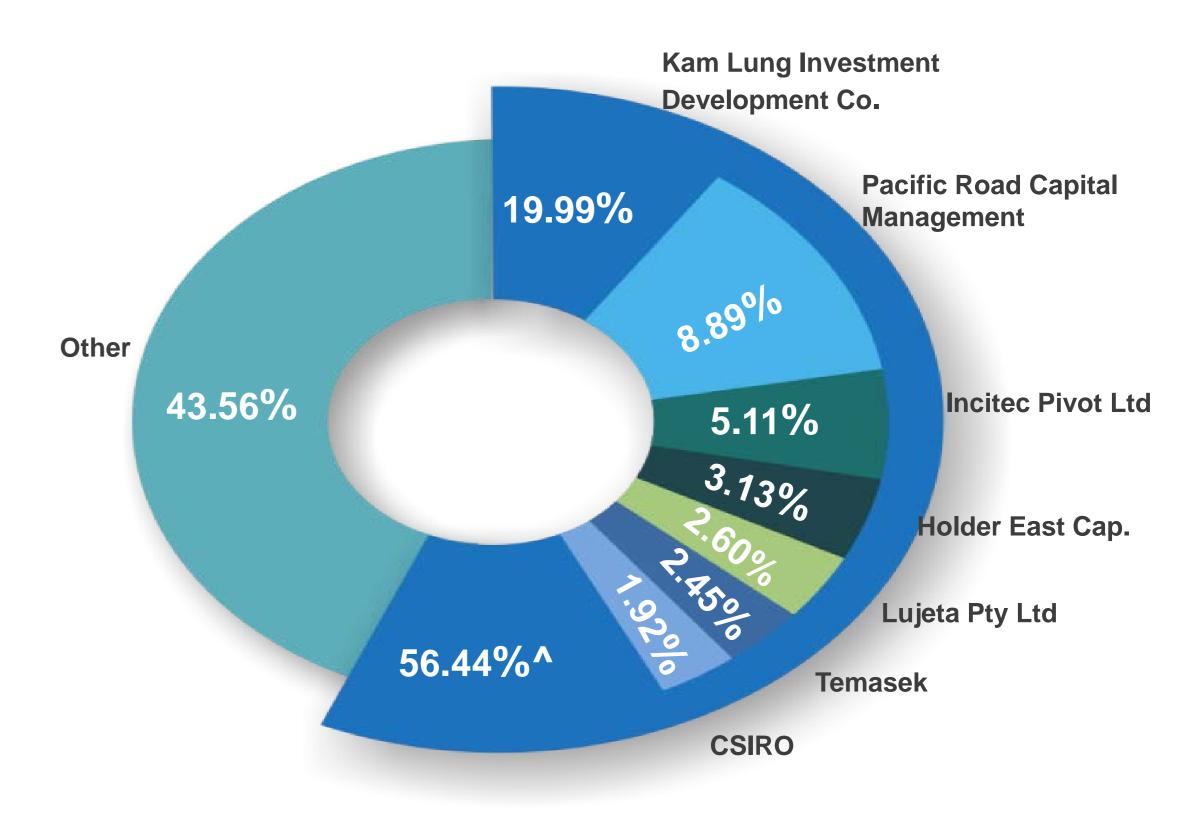
Further, Carbon Energy confirms that it is not aware of any new information or data that materially affects the information included in the Updated Reserves Statement and that all material assumptions and technical parameters underpinning the estimates in the Updated Reserves Statement continue to apply and have not materially changed.

keyseam<sub>®</sub> is a registered trademark of Carbon Energy.

## COMPANY OVERVIEW

- Technology Company based in Queensland, Australia, ASX listed
- Leading keyseam technology, developed in collaboration with Australia's premier research agency the Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Technology licensing and engineering services including site geological suitability assessments
- Focused on providing a low cost energy (syngas) feedstock for downstream users

### Major Shareholders



^Total Top 20 Shareholders (27)



## OBJECTIVE & STRATEGY

To establish keyseam<sub>®</sub> as the gasification technology of choice for monetising deep coal resources worldwide.

This will be achieved through the downstream use of keyseam syngas as a commercial and environmentally effective alternative to current gas feedstocks.



# STRATEGIC PRIORITIES



## Further licensing of projects internationally

- Build on existing projects with Chinese partners leveraging commercially proven design keyseam technology, trial results and growing Chinese clean energy demand
- Further licensing deals will bring additional revenue and confidence in the technology
- Outcomes of rigorous scientific review will assist further business development



## State Government approval to proceed commercially

- All requirements met to satisfy preconditions to commercialisation in QLD
- Environmental Impact Statement (EIS) ready to commence
- Awaiting QLD Government further advice on policy direction before can proceed

Priority 3

Development of QLD Blue Gum Gas project – Stage 1 Mid-Scale Project

- Stepped approach mid-scale commercial project then full-scale commercial facility
- Commercialising Blue Gum project in staged approach to help monetise domestic assets

# 2015 PROGRESS

#### **Corporate and Australian Focused Progress Made**

- Scientific credentials confirmed through pilot project strengthening foundations of business
- Lodged Decommissioning Report and Rehabilitation Plan completed for Bloodwood Creek pilot project
- Completion of Independent Scientific Panel (ISP)
   recommendations at Bloodwood Creek as concluded by QLD
   government appointed experts
- First Bloodwood Creek Rehab Status Report submitted rehabilitation on track
- Continued engagement with QLD government re: commercialising Blue Gum Gas Project



Photo: Bloodwood Creek



# 2015 PROGRESS

#### **Strategic Review and Project Refocus**

- **Strategic rebase:** 
  - Company realigns priorities to progress the commercialisation of its keyseam technology
  - Primarily focused on Asia + will look at opportunities in as and when they arise
- China focused JV agreement established:
  - Sets the foundation for commercialising keyseam technology in China
  - JV Formation pending agreement of shareholders and Chinese Government which expected to be concluded in 2016
- **Became Foundation Partner of China's International UCG** Research Institute to help form operational and environmental standards in China
- Increased support from cornerstone investor to 19.99%

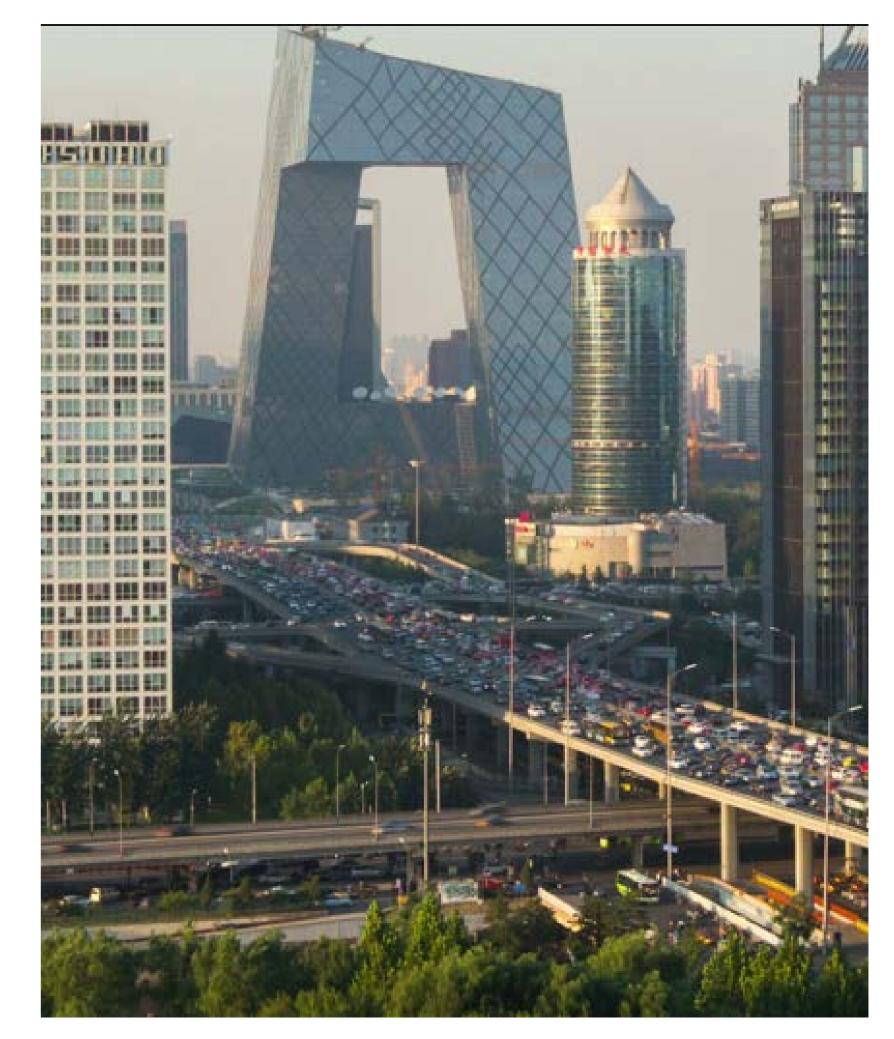


Photo: Beijing, China



## FOCUSED COMMERCIAL OPPORTUNITY

Company Assets

Scientifically **Proven Base** 

**Target Commercial Opportunities** 



COAL



**GAS RESERVE** 





Proven Credentials

**CSIRO** Developed Initially

6+ Years of Further R&D

> Proof of Concept Reached

QLD Govt Rigorous Review

Environmental

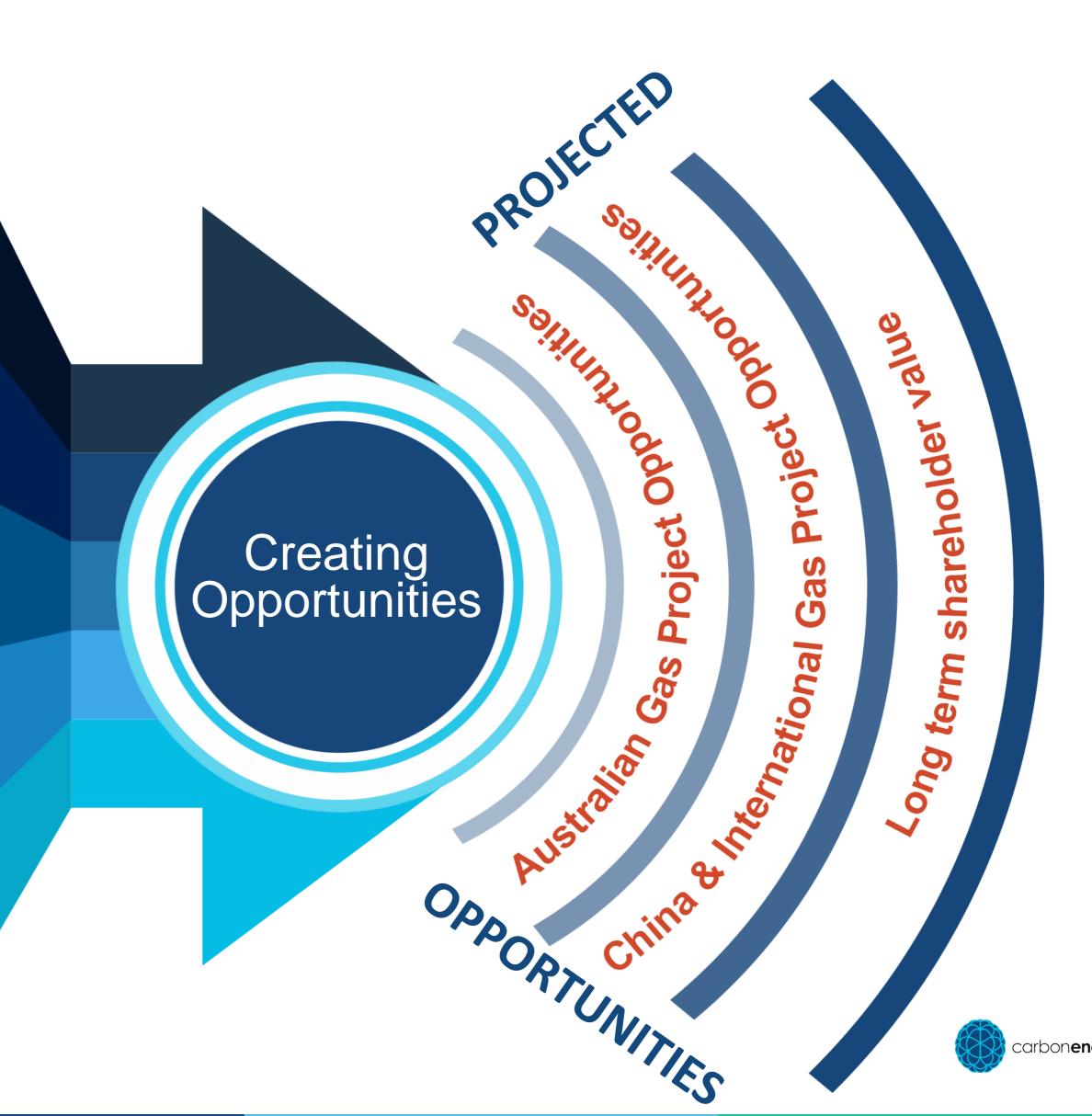
Supportive Government Policy

Deep Coal Resources

High Priced **Gas Markets** 

Focused Manufacturing Hubs

> Cleaner Energy Requirement



**Established Foundation** 

### COMMERCIAL EXECUTION PHASES

keyseam<sub>®</sub> Licensing and Gas as Feedstock to Downstream Users



Commercial
Demonstration
Project

Typically consists of one panel used as a co-feed gas to an existing downstream plant.



Mid-Scale Commercial

More than one panel.



Full-Scale Commercial

Expansion of mid-scale project.

Condensed timeline by utilising already established downstream plants

### CHINA GAS MARKET

### Ripe for keyseam<sub>®</sub>

- China's cleaner energy demand is set to increase heavily over the next decade
- Unlocking new energy sources that are commercially and environmentally sustainable have become a priority
- Reflected in anticipated inclusion of UCG in the Chinese strategic five year plan (13th 5YP)

China	keyseam®
Abundant deep coal	Access stranded (deep coal) reserves
Population growth = increased energy usage	Unlocks new energy sources
Targets for greater energy independence	Utilises unused State owned resources
Focus on manufacturing = requirement for gas feedstocks	Economic costs compared to natural gas and aboveground gasification
UCG a strategic pillar for next 5YP	keyseam's technical and environmental credentials
Water scarcity across N/NW China	Minimises use of water vs other "coal to" technologies

### JINHONG JOINT VENTURE

#### **Purpose:**

 To develop a vertically integrated gas company utilising the keyseam technology in China.

#### **Approvals:**

- CNX Shareholder approval at AGM 30 Nov 2015.
- China Ministry of Commence approval to be gained by mid-2016.
- JV becomes effective after all approvals gained in 2016.

#### **JinHong Contribution & Distribution:**

- JinHong is required to contribute US\$30 million over three years.
- JinHong will be entitled to 70% of dividends.

#### **CNX Contribution & Distribution:**

- CNX will only provide the JV with an exclusive technology license on successful ignition of demonstration project.
- CNX has non-dilution rights.
- CNX will be entitled to 90% of License fees before the JV is allocated an exclusive license and 30% following the allocation of the exclusive license earned by the JV.



Photo: Beijing, China



### JINHONG JV COMMERCIALISATION STAGES\*



### JV Establishment

- CNX shareholder approval
- PRC Gov approval of JV
- US\$30m total contribution
- JV Beijing office established
- Gain PRC Gov. technology support during 2016
- First JV Board meeting
- Confirm JV strategy, execution, budget etc.
- Identify project opportunities



### **Project Selection**

- Secure coal leases
- Near existing gas users
- Site suitability assessment
- Project PRC/local Government approvals to be gained
- Licensing and service agreements



### **Project Execution**

- Feasibility studies
- Appoint EPCM Company
- CNX Engineering services
- **Project Procurement**
- **Project Construction**
- Off-take agreements negotiate and execute
- Commercial operation and ongoing support

November 2015

\* Estimated timeline only as subject to CNX Shareholder approval, consent by Pacific Road as Note Holder, approval of the JV structure by the PRC, finding a suitable coal field suitable for keyseam etc.

< September 2016

< April 2017

**Demonstration ignition** required by April 2017\*



### JINHONG JOINT VENTURE ADVANTAGES

### A Strong Partnership for Future Growth



fully commercial funded **First** demonstration Project to be established outside Australia.



First commercial mover in market to China's capitalise supportive government environment.



Shareholder value protected. Transaction structured to reduce execution risk and maximise returns.



A source of revenue to Carbon Energy in technology service and contracted license fees.



**Support from the Company's cornerstone** investor Kam Lung with experienced local business and government contacts.



Carbon Energy has equal voice in setting the strategic direction and management of the JV irrespective of its % share.



The JV allows CNX to showcase the most up to date application keyseam to attract further investors.



Independent Expert concludes Proposed Transaction is fair and reasonable.

### INTERNATIONAL UCG RESEARCH CENTRE

Carbon Energy becomes the foundation partner of the research institute set to drive standards and innovation of UCG in China.



#### The World's Largest Mining University

China University of Mining Technology is one of China's top national universities as well as the word's largest mining university.



#### **Chinese Government Backing to be Gained**

The formation of the Centre has been established to gain the backing of the National Development and Reform Commission (NDRC) - China's central planning agency.



#### **Recognises Carbon Energy's Achievements**

The invitation to be a foundation partner is recognition of the Company's achievements and also provides a credible reference platform to develop further business relationships in China.



#### **Promote China's UCG Market & Set Global Benchmarks**

The purpose of the Centre is to establish the highest standards in developing and managing UCG in China.



**Photo:** China University of Mining Technology

# QLD REMAINS A PRIORITY

- CNX maintains significant gas and coal assets in Queensland
- The Company's headquarters, workforce, technical services and demonstration facilities are located QLD
- The Company remains committed to helping industrial users find reliable low cost gas feedstock
- CNX is well positioned to supply gas to local industry subject to Government policy, approvals and funding

### **Next Steps**

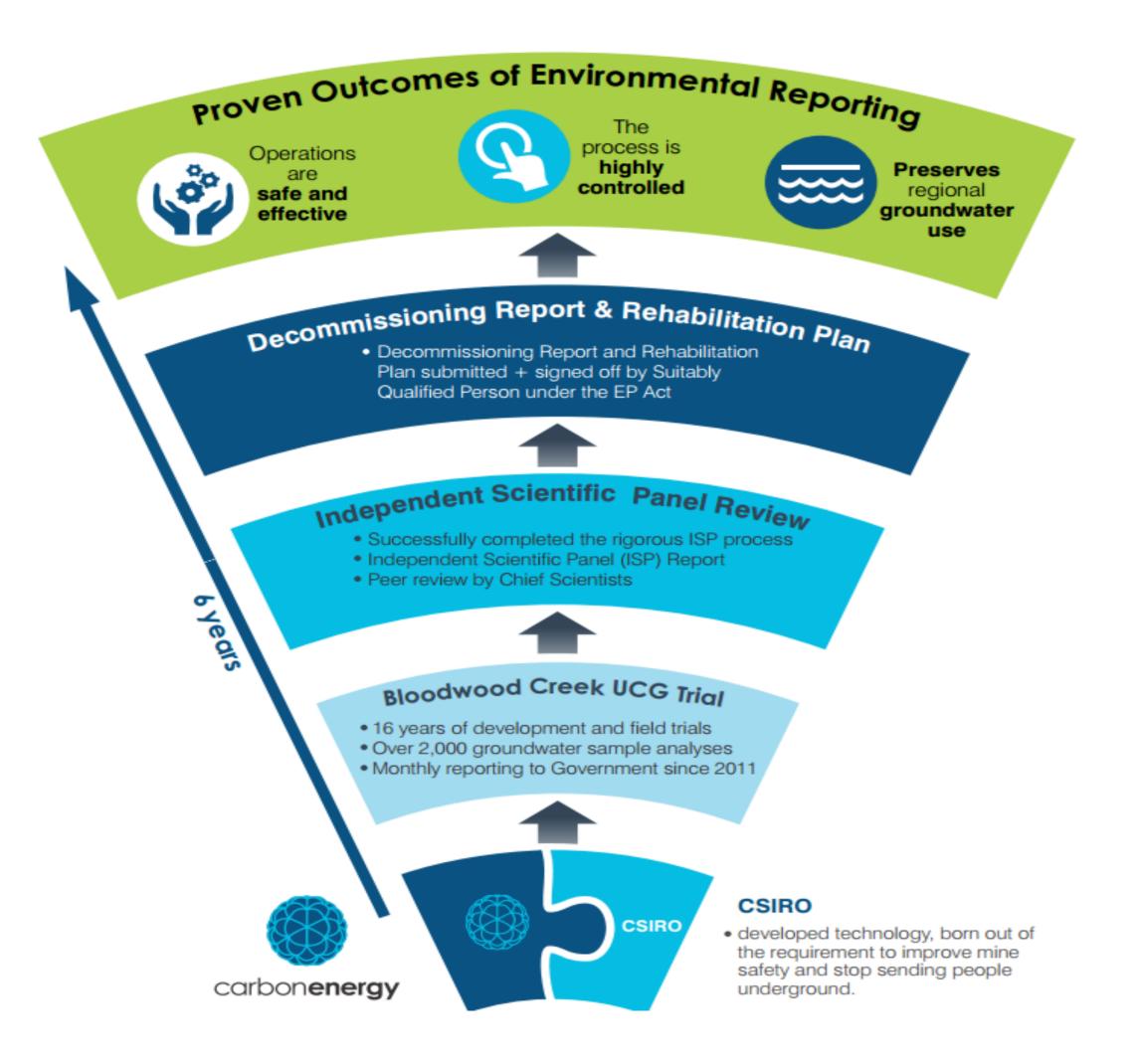
 QLD Government to confirm policy for commercialisation of keyseam



Photo: Bloodwood Creek

## STRONG SCIENTIFIC CREDENTIALS

Most Comprehensive, Complete Lifecycle Industry Review Ever Commissioned



#### RIGOROUS REVIEW PROCESS

- 6 years of rigorous scientific review of commercial scale operations
- > \$150 million in R&D
- 2000 groundwater samples

#### **Outcomes:**

The only company to successfully complete full-life cycle UCG trial under intense independent environmental scrutiny

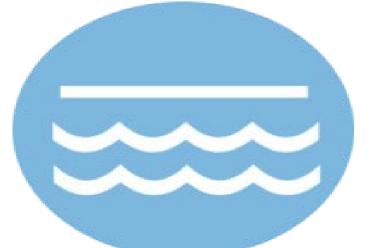
#### **Scientifically Proven:**

- Operations are safe & effective
- Process is highly controlled
- Preserves regional groundwater

## ENVIRONMENTAL BENEFITS\*



- Small footprint for amount of energy recovered
- Maximises resource efficiency



- No impact on regional groundwater use



- No fracking, excavating or coal transporting
- Ash remains underground

<sup>\*</sup>Compared to conventional coal mining and other gas operations

## IN SUMMARY

- Scientific credentials and commercial application of keyseam technology confirmed through demonstration project
- Strategic focus Company to apply its keyseam technology to meet Asia's growing clean energy demand
- China Joint Venture Foundation for commercialising keyseam technology in China
- Backed by Chinese cornerstone investor CNX shareholding increased to 19.99%
- QLD keyseam project further development pending government policy



# APPENDICES

### **Head Office Brisbane:**

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### **Marina Cid**

Investor Relations Manager Email:

mcid@carbonenergy.com.au

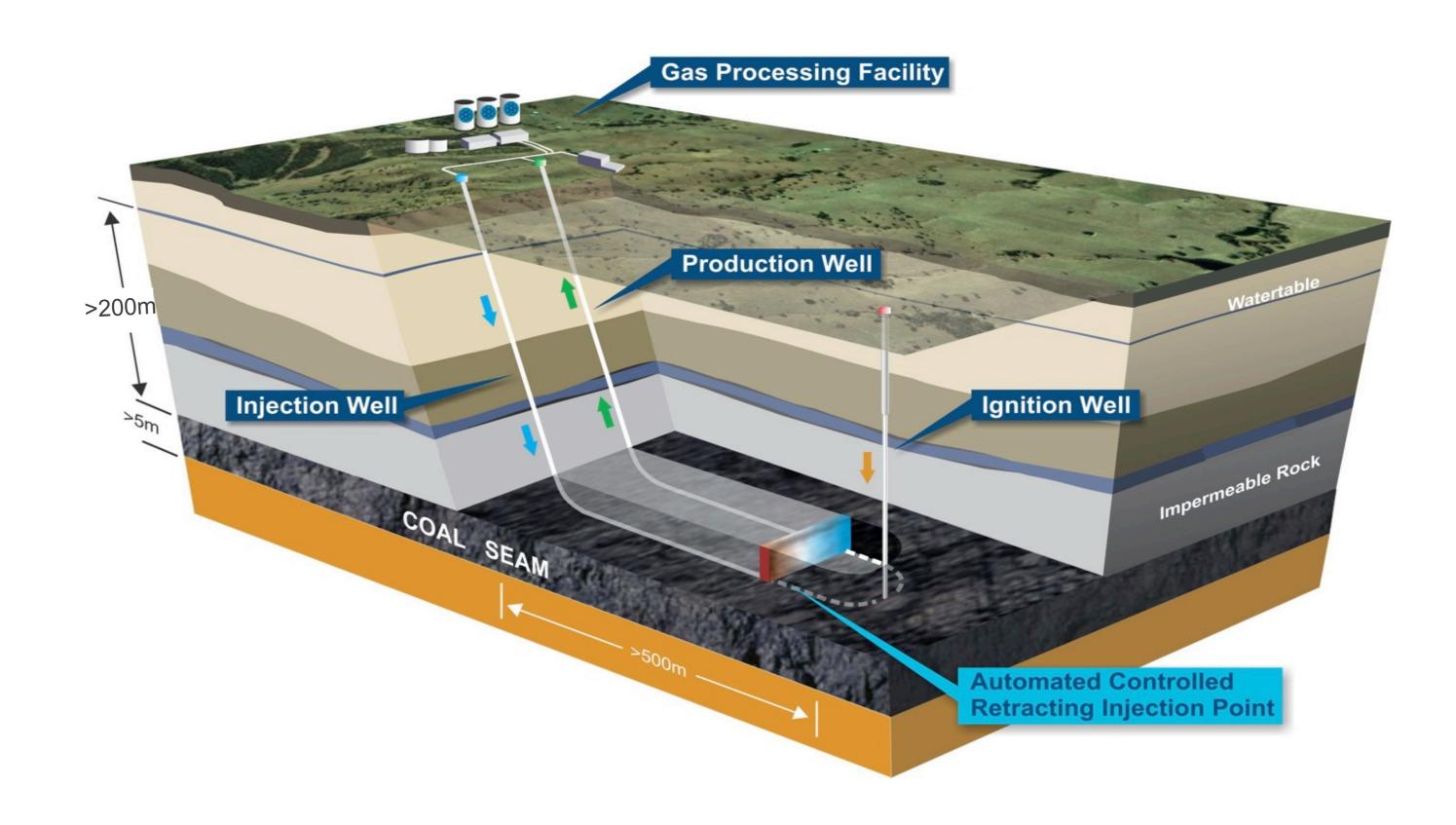


**Appendix Follows** 

# keyseam. DIFFERENCE

keyseam's world leading technology delivers proven environmental credentials and effective innovation of syngas production

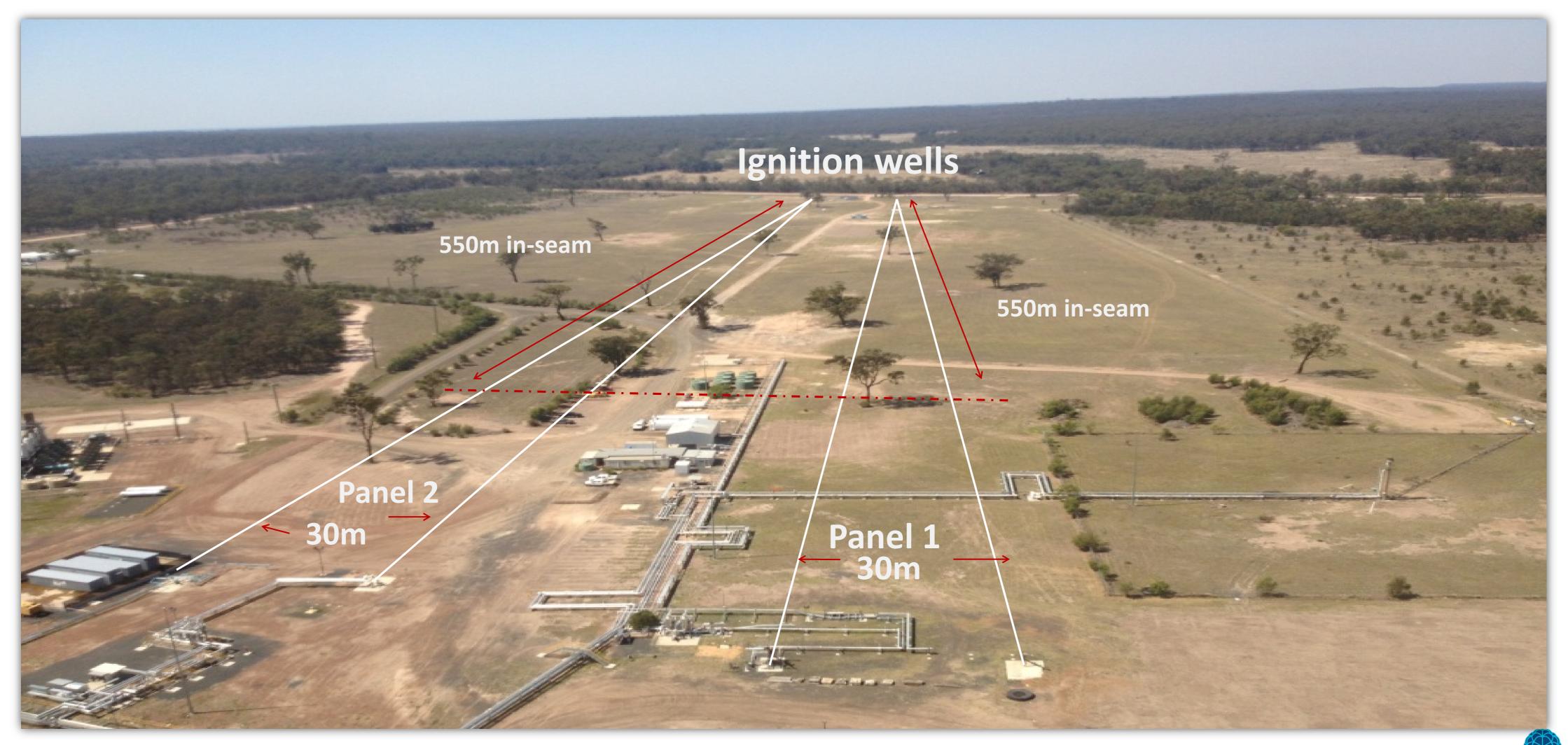
- Initially invented by Australia's premier research agency the CSIRO, further enhanced by 6 years of in-field trials
- Unparalleled site selection and advanced geological modelling
- Complete innovation delivering high quality more consistent gas production.
- Continuous/automated gas production
- Comprehensively and successfully achieved rigorous environmental credentials



# BLOODWOOD CREEK PILOT SITE



# BLOODWOOD CREEK PILOT SITE



## BLOODWOOD CREEK PILOT SITE









keyseam<sub>®</sub> - MARKETS 17 GJ **Syngas** 11 GJ SNG 530 litres or 0.36t **Ammonia** 450 litres or 0.36t **Methanol** 1 tonne BWC coal 1.86 MWh **Electricity** through utilising keyseam can produce one of these options.

