



carbonenergy

Carbon Energy Limited | ABN 56 057 552 137

## ASX / Media Announcement

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## Concept Study Identifies Significant Mining Opportunities

Carbon Energy (ASX: CNX, OTCQX: CNXAY) today announced it had identified at least three longwall mining areas each with the potential of mining 5 million product tonnes per annum of thermal coal following the completion of its conceptual mining study across its coal tenements in the Surat Basin, South East Queensland (see Appendix A).

The results of the study confirm the Company holds significant coal assets with the potential for development into substantial mining operations.

Additionally the study estimates total production cost at A\$81 per tonne (+/-50%) Free On Board (FOB) at Gladstone (see Appendix C). The independent conceptual mining study was commissioned by the Company as part of its strategic review to identify the best approach to maximise the value of its coal deposits and to determine which packages will be suitable for open cut or underground mining.

The study identified three mining areas with a target working section of 4.5 metres. Production was staged to produce an average of 12.5 million tonnes p.a Run of Mine (ROM), for over 35 years as shown below:

| Mine Area | Seam       | 1 <sup>st</sup> Production | ROM Production | Life of Mine |
|-----------|------------|----------------------------|----------------|--------------|
| LW1       | Macalister | Year 1                     | 6.5 Mtpa       | 17 years     |
| LW2       | Macalister | Year 4                     | 6.5 Mtpa       | 15 years     |
| LW3       | Wambo      | Year 15                    | 6.5 Mtpa       | 26 years     |

Target production rates reflect those currently being achieved in longwall operations in QLD and NSW.

Additional coal is available outside the working seam section at all sites. Optimisation of the working section and/or the use of non-conventional extraction techniques (e.g. Longwall Top Caving) which could extract greater than 4.5m of the seam, will improve resource recovery and reduce unit costs. These optimisations and opportunities will be explored in subsequent studies.

The study uses a Coal Handling and Preparation Plant (CHPP) yield of 78% to achieve an export thermal coal product. This yield is based on typical results for producing Surat basin mines when mining the whole Macalister seam thickness. The ability to target an optimal 4.5 m working section is likely to enhance the yield achieved from these projects and will be an area for future optimisation studies.

The report highlights favourable mine locations with two of the three sites unaffected by Strategic Cropping Land (SCL). One of the project areas contains a partial overlap of SCL, and will therefore require further assessment.

Infrastructure requirements for development of coal projects on the tenements were assessed as part of the scoping study. Importantly the Company's tenements are located close to QR National's existing West Moreton Coal System. While there are plans for the proposed Surat Basin Rail project to link the West Moreton Coal System to the major ports facilities at Gladstone, further assessment and negotiation for access to rail infrastructure and port capacity is required.

The report also identifies an additional two longwall mining areas which are not sufficiently defined for scoping at this stage. As further data becomes available the Company will progress studies into the additional sites identified.

Carbon Energy Managing Director Andrew Dash said "The study identifies the potential of Carbon Energy's coal assets and provides a sound basis to proceed with the next phase of project assessment".

The Company aims to upgrade its substantial coal resources through a modest program of exploration drilling, incorporating coal quality and washability testing. The Company has previously reported a JORC Inferred Resource of 1.4 billion tonnes across its 1400km<sup>2</sup> of exploration permits for coal EPC in Queensland's world-class Surat Basin coal precinct.

Carbon Energy plans on utilising the funds generated from monetising its coal assets to further develop its core business of providing underground coal gasification technology and services.

**ENDS**

For and on behalf of the Board



Andrew Dash  
Managing Director

**For more information please contact Andrew Crook on +61 419 788 431  
or refer to our website at [www.carbonenergy.com.au](http://www.carbonenergy.com.au)**

## About Carbon Energy

Carbon energy specialises in underground coal gasification (UCG). Our proprietary keyseam technology is the key to unlocking new energy sources, transforming stranded, deep coal resources into high-value fuels with lower carbon emissions.

Carbon Energy's complete end-to-end UCG services deliver world-class gas projects from initial project assessment through to commercial project development, operations, site decommissioning and rehabilitation.

Carbon Energy achieved Proof of Concept of its technology following 10 years of research with Australia's premier scientific research agency, the Commonwealth Scientific and Industrial Research organisation (CSIRO), 5 years of in-field trials and over \$100 million investment in technology development.

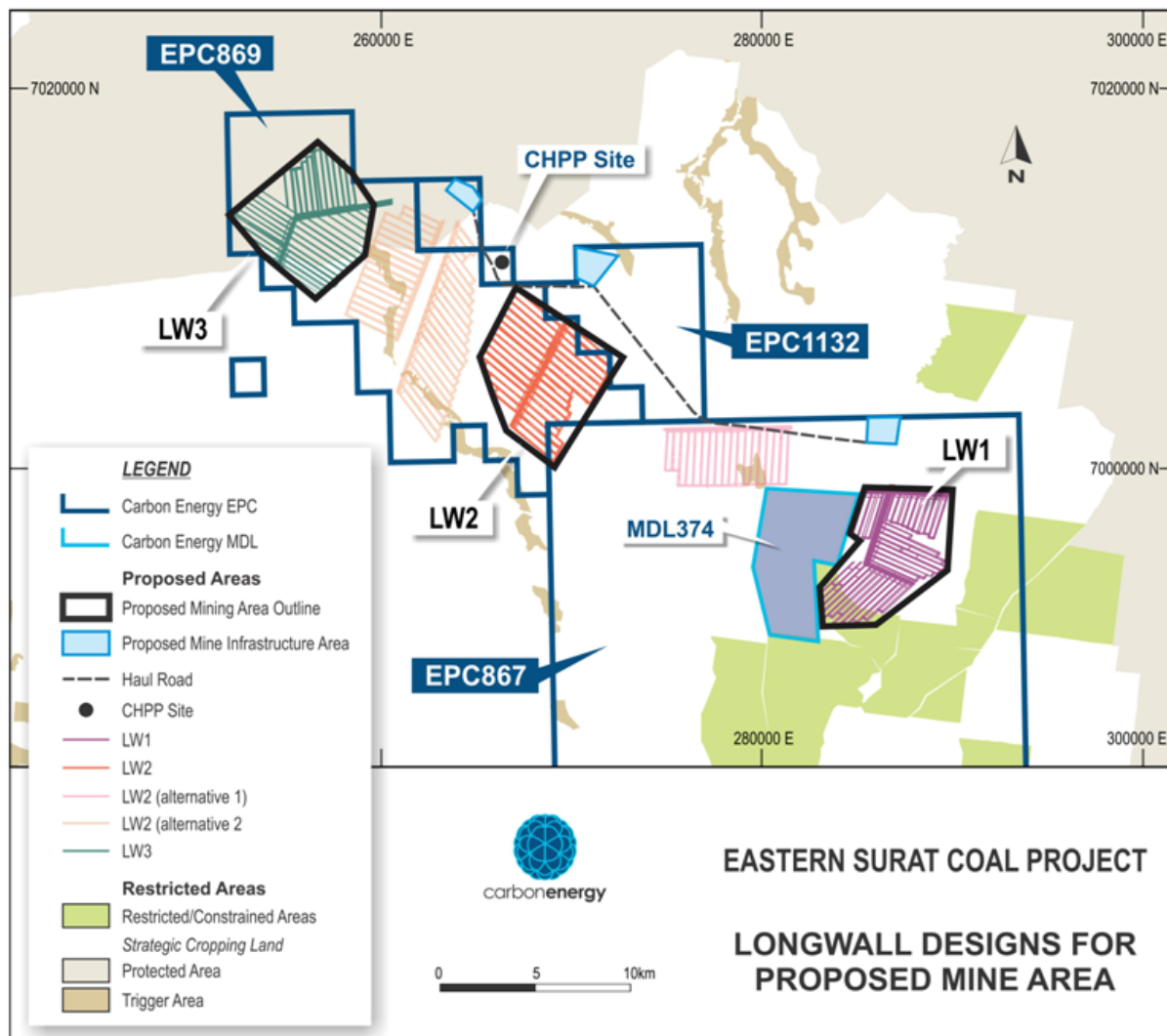
By successfully proving our keyseam technology, we have earned a reputation for delivering consistent, high quality product gas which can be used to produce power, fertilisers and pipeline quality gas. keyseam maximises resource efficiency, extracting up to 20 times more energy from the same resource than coal seam gas (CSG), whilst minimising surface disturbance and preserving groundwater quality.

Carbon Energy also has previously announced two wholly-owned assets in southeast Queensland's Surat Basin:

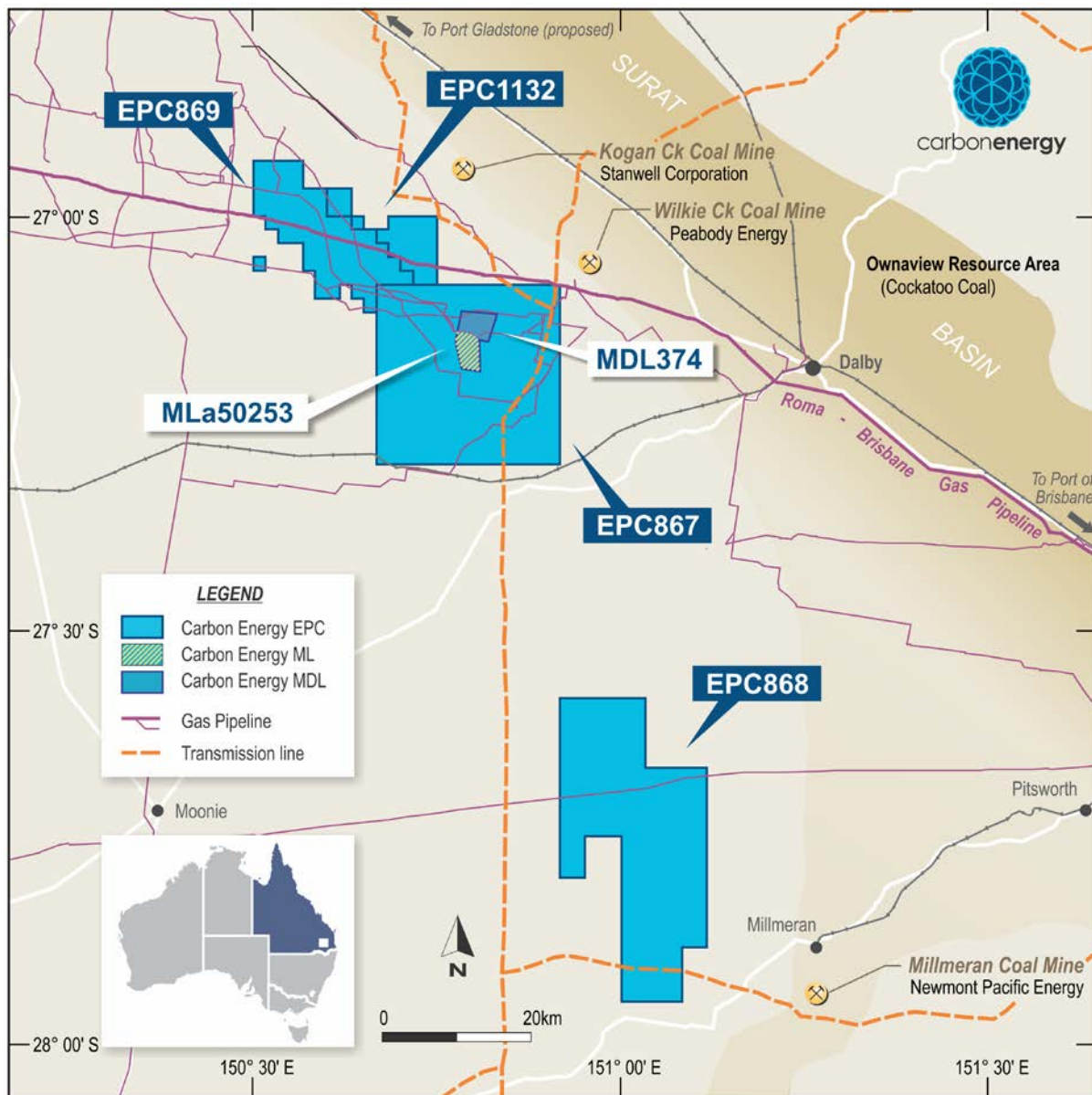
- 1.4 billion tonnes of coal JORC Inferred Resource which is part of a 4 to 8 billion tonnes of coal Exploration target; and
- 743PJ of Certified 2P syngas reserves.

The Company is headquartered in Brisbane, Australia, listed on the Australian securities Exchange (ASX) as CNX and is quoted on the OTCQX International Exchange as CNXAY in the united states. Carbon Energy has UCG projects in Australia, China, Chile, Turkey and the United States.

## APPENDIX A - CONCEPTUAL MINE PLAN LAYOUTS



## ANNENDIX B – EXISTING INFRASTRUCTURE AVAILABILITY



**Carbon Energy Coal Tenure Surat Basin**

## APPENDIX C – PRODUCTION COST ESTIMATES

| <b>Operating Cost (AUD mid 2012)</b>                  | <b>\$ Per tonne</b> |
|---|---------------------|
| Underground mining (per ROM tonne)                    | \$23.45             |
| Coal handling and preparation (per ROM tonne)         | \$5.35              |
| Other Costs (per ROM tonne)                           | \$3.11              |
| Total (per ROM tonne)                                 | \$31.91             |
| <b>Sales Cost (AUD mid 2012)</b>                      | <b>Per tonne</b>    |
| FOR cost @78% yield (per sales tonne)                 | \$38.93             |
| Rail Costs (per sales tonne)                          | \$31.00             |
| Port Costs (per sales tonne)                          | \$7.50              |
| Marketing and Overheads (per sales tonne)             | \$3.50              |
| Total Cost per sales tonne FOB Gladstone (ex royalty) | \$80.93             |