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## **ASX ANNOUNCEMENT / MEDIA RELEASE**

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### **START UP OF CHINCHILLA UCG GENERATOR 4**

- **Start up of UCG Generator 4 and production of Syngas**
- **GTL plant modifications concluded successfully with catalyst reduction complete in readiness for UCG Generator 4 gas**

Linc Energy (ASX:LNC) (OTCQX:LNCGY) is pleased to report that the construction of Chinchilla Underground Coal Gasification (UCG) Generator 4 is now complete and the generator is now operational and producing synthesis gas (syngas).

UCG Generator 4 has been designed and constructed to demonstrate key productivity, scale and reliability enhancements that will prove critical for ensuring future sustained commercial UCG success. In particular, Generator 4 will validate the ability of Linc Energy's technology to deliver high quality, low cost syngas with increased levels of reliability at commercial scale, which will provide further confidence ahead of commercialisation in South Australia and North America.

The key technical attributes of Generator 4 are based on the learning and success from previous Chinchilla UCG generators. These characteristics will further enhance the key drivers of reliable, low cost gas production that are well understood as a result of Linc Energy's extensive gas cost analysis, technical data and gasification modelling work. The new UCG generator will demonstrate:

- Increased gas production rates and economies of scale significantly reducing capital requirements per unit of gas production. It is expected that UCG Generator 4 will produce approximately twice as much syngas per well than the previous UCG Generator 3.
- Increased coal and energy resource recovery.
- Reduced capital costs and, in conjunction with increased energy resource recovery, further increases in capital efficiencies (cost per unit of energy). This is achieved by recovering more coal per unit of capital spent and by drilling fewer wells per generator. UCG Generator 4 is comprised of only 3 key wells, as opposed to Generator 3 which comprised 8 wells.

- Significantly increased commercial generator size and life with the latter supported by improved down-hole and well design technologies to increase reliability and to enhance the consistency of synthesis gas production and quality over the life of the generator. Linc Energy has been able to design a UCG generator with longer horizontal wells substantially extending the size and production life of each UCG production generator, allowing Linc Energy to produce more syngas over a longer period of time. It is anticipated that Generator 4 will operate for at least two years in its current format.
- Additional and improved techniques for water resource management. Linc Energy has constructed a water clean-up plant at the Chinchilla site in combination with Veolia to eventually take all the water produced, clean it and re-inject it back into the UCG generator to obtain better efficiencies, both in cooler operating temperatures in the wells and in the ability to produce additional hydrogen.

In addition to the above objectives, Generator 4 has been designed to incorporate oxygen enrichment of the air stream and a trial with oxygen is planned for the current quarter of 2010 as part of the Generator 4 program. This work is designed to validate Linc Energy's oxygen enriched oxidant gasification modelling and technology. The concept of using "enriched air injection" has always been part of Linc Energy's commercial plan from inception and is a key philosophy to increased UCG efficiency at depth and cost effective operation by avoidance of uneconomic designs requiring pure oxygen injection.

The new Generator 4 design is easily replicated in order to deliver the high gas production volumes (in excess of 100 PJ/annum) required for a commercial scale (20,000 barrels/day) Gas to Liquids (GTL) facility. Further, the Company's UCG technology can accommodate enhancements to suit the specific attributes of coal resources in South Australia, Wyoming or elsewhere so as to increase and optimise performance and lower production cost.

Based on the level of technical enhancements incorporated into the new UCG generator design, the key technical improvements embodied in Generator 4 will be replicated in the pre-production **UCG Generator 5** that is planned to be developed and commissioned at Orroroo, South Australia in the second half of 2010. Significantly, UCG Generator 4 provides the Company with a base UCG commercial generator model for use on all of its future UCG operations.

Another of the key objectives for Generator 4 is the production of high quality synthesis gas to feed the Fischer-Tropsch GTL facility at Chinchilla. The Chinchilla GTL demonstration facility has also recently undergone modifications aimed at further increasing catalyst activity and gas conversion. Those modifications have now been commissioned and are performing to expectations. In readiness for the introduction of synthesis gas from UGC Generator 4 into the GTL demonstration facility, catalyst reduction has now been completed, with syngas expected to be reintroduced shortly.

The improvements to the GTL plant will allow Linc Energy to increase production rates further, with longer campaigns to produce increased volumes of hydrocarbon liquid products that can be used for market entry and other technical assessments. In particular, it is the Company's aim to be able to treat and refine (off-site) approximately 20,000 litres of Linc Energy synthetic liquids from Chinchilla into Jet A-1 fuel, for performance testing in a jet engine in the latter part of this year; a significant milestone in the context of the recent decision by the U.S. FAA to allow the use of a 50:50 blend of synthetic Jet A-1 fuel in the United States commercial airline industry.

In announcing this important milestone, Linc Energy's Chief Executive Officer, Mr Peter Bond commented that "the amount of technology development that has been accomplished in the past 12 months by our talented UCG and GTL teams has been beyond even my very high expectations. UGC Generator 4 represents the culmination of so much hard work and to complete this work on budget and in less than five months since project conception is a fantastic result which demonstrates the capability we are developing in this business."

Mr Bond went on to say that "this UGC Generator 4 will not only provide the technology template for our commercial production model at Orroroo in South Australia which Linc Energy will start later this year, but will also provide an ongoing supply of high quality synthesis gas to enable us to complete all of our remaining GTL development work at Chinchilla, including the production of diesel for market acceptance test work in readiness for moving quickly into commercial development at Orroroo, South Australia and our Jet A-1 test fuel program. The UGC Generator 4 is by far and away the world's most advanced UGC operation. I am very proud of my team's ability to deliver it as they have. In the next 90 days, Linc Energy will complete a technical report outlining the achievements of Generator 4 and report this to the market."

For further information please contact Peter Bond.



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## Company Profile

Linc Energy is an innovative, forward-thinking company developing a significant energy business based on the production of cleaner energy solutions.

Linc Energy has successfully combined two known technologies and demonstrated its vision of being a leading supplier of a new source of clean liquid transport fuels for the future.

The technologies are Underground Coal Gasification (UCG) and Gas to Liquids (GTL). UCG technology provides access to coal, deep underground and by in-situ gasification produces a high quality synthesis gas (syngas) containing carbon (CO) and hydrogen (H<sub>2</sub>). Aboveground, in the GTL process, syngas is processed via Fischer-Tropsch technology to produce high quality, sulphur free synthetic hydrocarbons.

Linc Energy plans to combine its UCG and GTL technologies commercially at sites in Australia and around the globe as it realises its vision of becoming the world's leader in providing clean synthetic diesel and jet fuels from stranded coal resources.

UCG produced syngas can also be used as a feedstock to generate gas turbine combined cycle power, resulting in reduced greenhouse gas emissions.

With significant coal deposits suitable for UCG technology, Linc Energy can provide alternative sources of liquid fuels and power generation well into the foreseeable future.

Linc Energy represents a new future for liquid fuels production and high efficiency energy generation.