

UCG-GTL Project

Overview

Linc Energy's Chinchilla Demonstration Facility has set the scene for greater energy security having proven that coal, from deep underground can be gasified to create synthesis gas (known as syngas). The GTL technology at this facility works to produce syncrude (which requires refinement to create diesel and other liquid fuel products) from UCG syngas.

The company is well-positioned to take these proven technologies to UCG-suitable locations around Australia and the world.

Linc Energy has been active in the Surat Basin, near Chinchilla, for over 10 years with its Underground Coal Gasification (UCG) technology. Gas to Liquids (GTL) operations began in 2008.

Its business objective is to become a significant producer of synthetic diesel fuel for the Australian and world markets and, 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.

Location	Status	Capital Exp \$	Workforce
20km SW Chinchilla	Chinchilla Demonstration Plant and Laboratory completed August 2008	\$1.2b	300 peak workforce 100 operation



Background

UCG operations began in July 1999 with the first UCG trial field, Generator 1. The first synthesis gas (syngas) was produced later that year. Since that time, Linc Energy has developed another three generators.

Construction of the GTL demonstration plant to produce cleaner fuels from UCG syngas began in October 2007. During construction, a laboratory was established on-site to complement the development of Linc Energy's technologies. The laboratory provides UCG and GTL operations with 24/7 support to deliver fast results for technical improvement and development.

Construction of the GTL demonstration plant and laboratory was completed by August 2008. The plant was commissioned and on 14 October 2008 the first liquid hydrocarbons were produced.

Chinchilla Demonstration Plant

The Chinchilla Facility is the world's first gas-to-liquid plant to operate on synthesis gas produced by underground coal gasification.

The facility hosts four underground coal gas generators, a GTL pilot plant, a world-class laboratory, and a wastewater treatment plant.

In 2010, the UCG team achieved over 20 world-firsts in UCG technology development with the design, construction and commissioning of Gasifier 4 at the Plant.

This year, Linc Energy is designing, constructing and commissioning Gasifier 5 which will operate in parallel with Gasifier 4. This will provide Linc Energy with multi-gasifier operating experience for the commercialisation of UCG across the world. Gasifier 5 will include the latest designs for gas and fluid separation and oxygen enrichment capabilities.