



Project overview

Fuel security for Queensland

The Felton area, 30km south west of Toowoomba and 10km south east of Pittsworth, could house Australia's first commercial scale coal-to-liquids project.

Australian company, Ambre Energy, is proposing ambreCTL, a \$3.5 billion project which will convert local coal to unleaded petrol and LPG. These fuels will be available for domestic use.

Ambre Energy is applying for mining leases covering around 2,800ha on the Felton North coal deposit. These leases are expected to cover the total land use needs over the project's lifetime, and only limited parcels of land will be mined at any one time.

The project will involve constructing:

- a fuel production facility delivering 940 million litres per year (ML/yr) of high quality unleaded petrol and 150 ML/yr of LPG
- an adjoining open-cut coal mine to supply four million tonnes per annum (Mtpa) of feed coal to the facility.

Coal from the mine will undergo a gasification process to produce a synthesis gas or 'syngas' for conversion to methanol. Methanol will then be converted to high quality unleaded petrol and LPG using ExxonMobil technology.

The fuels produced by ambreCTL will contain no sulphur and will require no additional refining prior to use.

Energy supply is a critical issue for all Australians - oil and gas prices have risen dramatically in recent years and remain high. Australian transportation is becoming increasingly dependent on the importation of crude oil.

Most importantly, it will help to provide fuel security for Queensland by reducing our state's reliance on petroleum products imported from overseas or refined from imported crude oil. By 2014, ambreCTL could meet over 20% of the state's demand for unleaded petrol.

Establishing an anchor coal-to-liquids industry may encourage other industries such as the manufacture of olefins (for the



If ambreCTL is approved, Ambre Energy will play a significant role in the evolution of fuels from coal and will bring new industry to Queensland.

This new project is expected to have many welcome economic benefits for Queensland, including job creation, royalties and taxation income, and increased regional and local business opportunities.

plastics industry), nitrogen (for the fertiliser industry) and high purity CO₂ for industrial uses, bringing further economic benefits to the region.

The state government will require an Environmental Impact Statement (EIS) to be developed for ambreCTL and Ambre Energy is developing draft Terms of Reference. A proposed timetable for the process will be published on www.ambreenergy.com when finalised.

Background

In early 2009, draft Terms of Reference for an EIS were released to build and operate a pilot plant at Felton to produce a fuel called dimethyl ether (DME), using new technologies.

Upon successful operation of the pilot plant, a commercial-scale operation was proposed, which included a 3.8 Mtpa open-cut coal mine.

Called the Felton Clean Coal Demonstration Project, Ambre Energy proposed investing substantially in new technology and processes to gasify coal and convert the resulting syngas to DME, a 'next generation' diesel alternative.

In response to global economic conditions, ongoing market assessments and a drive for continuous improvement, the project's scope has undergone some fundamental changes.

Ambre Energy has decided that only commercially-proven technologies should be used. The proposed Felton DME project will be replaced by ambreCTL, which will produce unleaded petrol and LPG instead of DME.

There is no longer any need for a demonstration or pilot stage. The new project will be constructed at full scale. Rather than trying to build a new market for DME, Ambre Energy will be able to tap into existing unleaded petrol and LPG markets.

The EIS process for the Felton DME project will be withdrawn as the new process begins.

About ambreCTL

Site selection

Tests show that the 2,800ha Felton project site contains a world-class coal deposit with the most optimal coal for coal-to-liquids conversion. This coal is relatively close to the surface.

Project benefits

ambreCTL will:

- create an estimated 1,170 jobs during construction of the fuel production facility and mine
- sustain around 540 permanent jobs during operation
- represent a \$3.5 billion+ investment in the Darling Downs and Queensland economies over the next three to four years
- stimulate other industries and further business development and employment opportunities in and around the project and the Toowoomba region
- stimulate a significant domestic fuel production market
- develop a process for the cleaner use of Queensland's coal reserves, particularly coal unsuitable for export.

Onsite

The mining operation will begin on the western side of Hodgson Creek where eight Mtpa of coal and interburden material will be extracted, crushed and washed, to supply four Mtpa of feed coal for the fuel production facility. Mining will progress to the west.

A flood levee will be constructed to help ensure runoff does not enter Hodgson Creek.

The site will contain the fuel production facility and open-cut mine, dams, conveyor systems, and a power generation plant. The facility will be designed as a zero liquid discharge facility and will maximise the reuse of process water.

During the two-year construction period, accommodation for any workers who do not live locally will be provided via a temporary camp. Ambre Energy will work with all levels of government and environment and industry groups to explore housing and camp site options.

Gas emissions

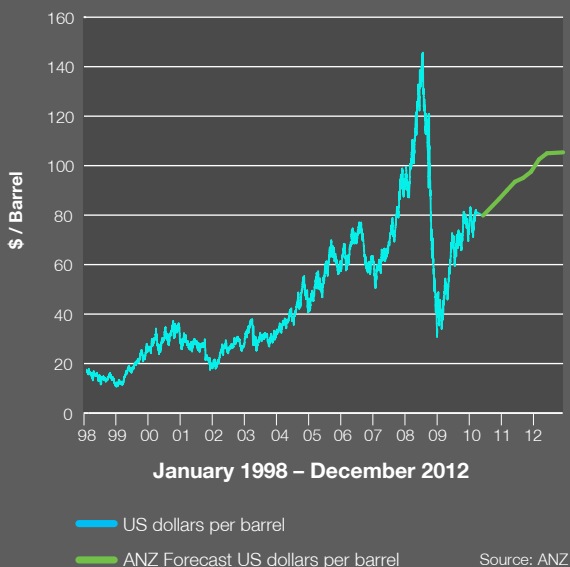
Air emissions from the facility will be similar to the emissions from a gas-fired power plant. It will be much cleaner than a normal coal-fired power station because of very low sulphur and particulate emissions. The facility will also capture a significant proportion of the CO₂ generated by the process in a high purity form suitable for sequestration, which initially will either be safely vented onsite or used for industrial purposes.

Power and water

A power generation plant will convert the fuel gas produced in the process to electricity. Once the facility is in operation it will be self sufficient with respect to power.

Ambre Energy is actively pursuing the purchase of recycled water and other treated water for the life of the project. This water will be transported by pipeline to the project site. Ambre Energy does not intend to extract groundwater for the operation of ambreCTL.

Crude oil price outlook



About the technology

The ambreCTL facility will use established international technologies for the conversion of domestic coal to unleaded petrol and LPG. Production will occur in three stages.

Stage 1 - conversion of suitable, high ash coal feedstock to syngas using commercially-proven gasification technology.

Stage 2 - conversion of the resulting syngas to methanol using an established and commercialised syngas-to-methanol process.

Stage 3 - conversion of methanol to 18,000 barrels a day of zero-sulphur unleaded petrol using established methanol-to-gasoline technology developed by ExxonMobil.

Above-ground coal gasification is at the heart of our coal-to-liquids process. It involves heating coal under pressure with low levels of oxygen and steam to produce a syngas comprised mainly of hydrogen and carbon monoxide.

The syngas may be used as a feedstock for the synthesis of chemicals, such as methanol and ammonia, or the production of a variety of liquid fuels, including unleaded petrol, LPG, DME and diesel.

Through ambreCTL, Ambre Energy will apply proven technologies to the mining and processing of coal to allow for the cleaner and more versatile use of this local energy-rich material.

The liquid fuels made from the Felton coal will be ultra-clean in comparison with existing fuels. In particular, all sulphur will be removed during the production process.

The production process will be designed using world's best practice for coal gasification, including CO₂ capture, to reduce emissions.

Land use and rehabilitation

Ambre Energy is committed to minimising the project's impacts. Within the project footprint, only several hundred hectares of land will be disturbed by mining at any one time. The mined land will be progressively rehabilitated to its pre-mining use as the mining operation advances. This is the most effective way to contain the disturbance to the site and enable rehabilitation to commence as early as possible.

Discussions with affected landholders about compensation or land purchases will be ongoing. Timing for compensation will depend on the circumstances of each case and the progression of the project. Ambre Energy will work closely with landholders to identify needs and concerns and to minimise uncertainty, property intrusion and impacts on land operations.

As some of the project land is capable of being cropped, Ambre Energy is also working with Australian and US soil scientists and rehabilitation experts to review local and international experience in returning mined agricultural land to its former productive capacity. Certain coal mining regions such as the US states of Indiana, Illinois and Kentucky have set new benchmarks in this field over the last few decades.



Ambre Energy's main goal is to commercialise its physical and technical resources through delivering ambreCTL, Australia's first commercial scale coal-to-liquids project.

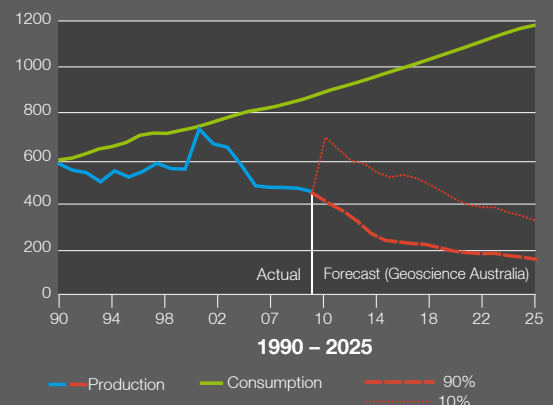
This proposal will require an EIS before any approvals can be considered. All impacts from the project (including land management, wastewater management, ground and surface water quality and conservation, air and CO₂ emissions, noise, transport, Native Title and cultural heritage, visual amenity, social impacts) will be identified during EIS studies.

Leading environmental consultants, SKM, will co-ordinate these studies and identify mitigation measures to address any issues or impacts. SKM will build on the findings of studies undertaken for the Felton DME project.

Ambre Energy will work closely with local landholders, communities and interest groups to deliver positive environmental, social and economic outcomes for the local area.

Forecast liquids supply and demand growing trade imbalance

('000 barrels per day)



Source: ABARE, Geoscience Australia, APPEA

Note: 90% represents Geoscience Australia's high probability case and 10% the low probability scenario.



Be involved

Community consultants, JTA Australia Pty Ltd, have been engaged to capture all community concerns, questions and comments, and will compile an independent report for government that will support decision-making processes.

A program of information sessions, briefings, meetings and other events is being finalised and will be promoted through the web (www.ambreenergy.com) and in local media.

If you would like to clarify any aspects of the proposed project, register for project updates or request a briefing for your stakeholder group, please contact the ambreCTL project team:

- call the free project information line **1800 262 285 (1800 AMB CTL)**
- access up-to-date material at **www.ambreenergy.com**
- email **info@ambreCTL.com**
- write to ambreCTL, **Reply Paid 81, Hamilton QLD 4007.**

Enquiries will be handled promptly and your privacy will be respected.

About Ambre Energy

Ambre Energy is an unlisted Australian company based in Brisbane, with offices in Salt Lake City, US.

It was formed five years ago following the sale by the company's founding shareholders of their stake in the Millennium Coal Project, a substantial open-cut coking coal mine and export operation near Moranbah in Queensland's Bowen Basin.

The company now has over 220 shareholders and has invested more than \$60 million to develop low cost clean energy technologies and acquire suitable coal deposits, including more than \$1 million spent in communities surrounding the proposed project.

Ambre Energy is a mining and technology company. Its core business is acquiring and developing coal deposits using efficient, low cost, clean coal technologies that convert sub-economic or low grade coal to higher value, cleaner forms of energy (particularly liquid fuels).

It is investing in the world's best chemical engineering, mining, environmental and financial experts and will use proven technology at Felton to produce alternative energy from coal.

Ambre Energy is growing its business through onshore and offshore projects which support its business strategy of developing and commercialising clean coal technologies to combat a declining liquid fuels problem. It is poised to commence coal mining operations in the US by mid-2010.

As an Australian company, Ambre Energy will retain control of ambreCTL and will supply large volumes of petrol to the domestic market over the next 35 to 40 years.

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