

MEDIA RELEASE



Algal Synthesiser offers renewed hope of rapid CO₂ emissions reduction

A new technology that may hold the key to rapid, large scale CO₂ emissions reduction from existing coal and gas fired power stations and other smoke-stack industries such as smelters and refineries, will be unveiled today as a curtain-raiser to three major trial installations along the east coast of Australia next year.

Algal Synthesiser technology captures flue emissions at the source, harnessing waste greenhouse gases as growth-promoting feedstock for conversion into oil-rich algal biomass for the production of oils suitable for plastics, transport fuel, and for nutritious, protein-rich stock-feed for farm animals.

MBD Energy Limited, the company behind the technology, has successfully partnered with one of the world's leading algal research teams, based at Australia's James Cook University, to develop a 5,000 square metre test facility capable of producing 14,000 litres of oil and 25,000 kilograms of algal meal from every 100 tonnes of CO₂ consumed.

Officially opening the research and development facility today, Queensland Premier Anna Bligh said that as coal is Australia's biggest export, it is both appropriate and desirable that Australia also lead the way in supplying a viable and sustainable technology solution to capturing, storing or recycling the emissions created by burning coal and gas.

The Premier announced that MBD would shortly commence construction of a one hectare fully commercial algal synthesiser at SE Queensland's Tarong Power Station with potential to grow in 2011 to an 80 hectare demonstration plant producing 11 million litres of oil for plastics and transport fuel and 25,000 tonnes of drought-proof stockfeed for an expected private and government sector outlay of \$25 Million. The facility is intended to be progressively expanded over the following five to ten years to daily consume more than half of all of Tarong's problem flue-gas emissions.

"If captured CO₂ can be recycled to be permanently stored in plastics, or to make large volumes of transport fuel and low-methane emission stock feed for farm animals, as two years of successful trials at JCU now show, Australia and the world may be about to turn an important corner on being able to set and attain significant CO₂ emissions reduction targets", the Premier said.

MBD Energy Limited Chairman, Jerry Ellis, said he was very pleased that one of the world's leading diversified mining groups, Anglo American, has recently become a corner-stone investor in MBD Energy, noting Anglo's assessment that despite the normal risks, MBD's Algal Sequestration has the potential to mitigate Anglo American's carbon foot-print.

Managing Director of MBD Andrew Lawson said using the most conservative cost to yield projections based on current outputs there could be no doubt that BIO-CCS in the form of algal and soil sequestration was most likely to emerge as the primary CO₂ abatement technology solution for existing coal and gas fired power stations, smelters and refineries around the world.

“Our fully enclosed and continuous cycle system has been designed to mimic the fundamental processes of the Earth’s natural carbon cycle, but taking a matter of hours rather than millions of years to produce valuable oil and other commodities – whilst also helping to significantly reduce atmospheric CO₂ levels more quickly – and without loss of jobs or harm to the economy. In fact, construction of Algal Synthesisers will create jobs, and the value-added supply-chain commodities produced will contribute to significant economic growth”, Andrew Lawson said.

Based on successful trials undertaken with its project collaborators at JCU, MBD Energy Limited has already secured three project agreements with the three largest coal-fired power stations in Australia to trial fully operational display plants to be built on waste buffer land adjacent to each emitter. One of the great attractions of the technology is that it has a relatively small land-requirement. The three power stations are Tarong in South East Queensland, Eraring in the New South Wales Hunter, and Loy Yang in Victoria’s Latrobe Valley.

In addition to converting waste gases into algal biomass, an Algal Synthesiser also has the potential to consume sewage leaving behind recycled clean water.

MBD’s Agri Business Manager, Tony St Clair said nutrition testing showed algal meal to be up to 50% protein and an ideal feed supplement for cattle, sheep and pigs with strong trial indications that significantly reduced methane emissions resulted in animals fed algae meal.

“There are numerous markets for our algal meal. It can be used as a drought-proof form of stockfeed, it can be turned into the soil as fertiliser or recycled a second time as energy feedstock for the furnaces of an Algal Synthesiser equipped power station”, Tony St Clair said.

Andrew Lawson said the level of cautious optimism about the proven science of the technology and the commercially attractive up-side to its deployment and operation means that MBD Energy expects to deliver one of the viable 20 large scale carbon capture and storage projects called for by G8 leaders and the Global Carbon Capture and Storage Institute by 2020.

“Based on the positive results of trials and project agreements, which have exceeded our expectations to date, the future for this technology as a viable, near market-ready BIO-CCS solution for the world’s major legacy emitters – especially coal burning power stations - is very bright”, he said.

MBD Energy is an Australian public unlisted company.

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