BROWN COAL INNOVATION AUSTRALIA

Positioning brown coal for a brighter future

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Media Release

BCIA announces $1.6 million in funding for low emission coal research

Brown Coal Innovation Australia (BCIA) today announced a combined total of $1.6 million dollars in extension funding for five key projects initiated under the Victorian Government's Energy Technology Innovation Strategy (ETIS).

BCIA Chair, Gerry Morvell, said: "Victoria faces significant environmental challenges to the economic advantages it derives from utilisation of its very low-cost brown coal resources.

"Extension of these five important research projects will maximise the benefits and outcomes delivered to date and assist in positioning Victoria for least-cost stationary energy supply and use in an emissions-constrained world," Mr Morvell said.

"Significantly, the extension funding will support skills development and research capability in brown coal emissions reduction technologies by enabling the improved transfer of information and knowledge and the retention of key research teams."

The five projects to receive BCIA approval for extension funding are:

- *'Pre-combustion carbon dioxide capture technologies for brown coal power generation'*, submitted by CO2CRC
- *'Advanced materials assessment'*, submitted by HRL Technology Pty Ltd
- *'Latrobe Valley post-combustion capture (LVPCC) project'*, submitted by Loy Yang Power Management Pty Ltd
- *'Advanced brown coal gasification'*, Department of Chemical Engineering, Monash University
- *'Oxyfuel combustion of Victorian brown coal'*, submitted by Department of Chemical Engineering, Monash University

The Government's ETIS program was established to deliver two key policy objectives:

- to contain greenhouse gas emissions from the supply and use of energy in order to develop a sustainable energy sector over time
- to drive improvements in energy efficiency and facilitate investment in sustainable energy supply sources to support the continuing competitiveness of Victoria's industrial base.

In brown coal research and development, ETIS facilitated and supported a coordinated approach to Government, researchers and industry working together to progress new, low-emission energy technologies through their innovation processes.

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Background Information

About BCIA
Brown Coal Innovation Australia (BCIA) will progress new brown coal innovation and emissions reduction research and development initiatives and will serve as a focal point for programs and projects underway.

BCIA is an independent company, established earlier this year, with a mandate to co-invest with stakeholders in skills development, research and development of new brown coal technologies and the adaptation of existing low-emissions technologies to Victoria's unique brown coal resource.

BCIA's funding agreement with the Victorian Government provides for multi-million dollar research and development investment in key activities in the brown coal innovation value-chain, spanning from mine-mouth to the capture of greenhouse emissions.

ETIS extension projects
'Pre-combustion carbon dioxide capture technologies for brown coal power generation', submitted by CO2CRC in association with HRL Developments Pty Ltd and researchers at the University of Melbourne and Monash University . The CO2CRC/HRL Mulgrave capture project is a first-time trial of pre-combustion capture technologies in an operating gasifier setting. The project aims to test solvent, adsorbent and membrane pre-combustion capture technologies, reduce the technical risk and cost of capturing carbon dioxide from pre-combustion sources and identify the most cost-effective technologies for Victorian use.

'Advanced materials assessment', submitted by HRL Technology Pty Ltd. The advanced materials assessment research program aims to develop improved procedures for power plant assessment and weld repairs. Extension of the program will allow the collection of longer term test data which will improve the validity of creep rupture properties inferred from the testing.

'Latrobe Valley post-combustion capture (LVPCC) project', submitted by Loy Yang Power Management Pty Ltd in conjunction with CO2CRC and CSIRO. This project is aimed at research and pilot plant deployment of prospective technologies for the post combustion capture of carbon dioxide from the flue gases of brown coal power stations. The project consists of research and pilot application of various solvent, membrane and adsorbent based technologies at two sites, Loy Yang A and Hazelwood. Extension of the project will enable further analysis, an extension of operating time, further experimentation with different solvents and confirmation of methodologies.

'Advanced brown coal gasification', Department of Chemical Engineering, Monash University
The aim of the project is to experimentally assess and demonstrate scientific aspects of a gasification concept to improve the efficiency of gasification of Victorian brown coal at low temperatures through high carbon conversion. Extension of the project will provide for the enhancement and transfer of information and knowledge and the consolidation of gains generated earlier in the project.

'Oxyfuel combustion of Victorian brown coal', submitted by Department of Chemical Engineering, Monash University. Oxy-fuel combustion is a potential means of reducing net carbon dioxide emissions from brown coal power plants. The main purpose of this project is to obtain key information about the behaviour of Victorian brown coal under oxy-fuel combustion conditions. The economic benefits of retrofitting oxy-fuel combustion to power plants is also being assessed. Extension of the project will facilitate process modelling and economic analysis of a purpose-built supercritical oxyfuel unit, experimental work on trace particle emission and assessment of fouling under oxy-fuel conditions.