

Asia-Pacific Partnership on Clean Development and Climate

CLEANER FOSSIL ENERGY TASK FORCE - UPDATE



Australian Government

PIC Meeting
29-30 October 2008
Vancouver, Canada





Task Force Progress



- 1st Meeting, Berkeley: 18 – 21 April 2006
- 2nd Meeting, Tokyo: 20 – 21 July 2006
- 3rd Meeting, Beijing: 4 – 5 July 2007
- 4th Meeting, Melbourne: 31 March – 3 April 2008
 - Held in conjunction with a joint meeting of the Power Generation and Transmission Task Force
 - Over 150 participants from industry, research and government
 - Members were pleased with progress on projects and welcomed efforts made to collaborate and share information



CFE Projects



- The CFE Action Plan currently contains 16 projects
- Most projects have commenced the implementation phase and are starting to achieve results
- Three projects have been successfully completed
 - CFE-06-2 Ultra-supercritical Pulverised Coal and Carbon Capture Workshop
 - CFE-06-07 Integrated Gasification Combined Cycle with CCS Workshop and Design Information for APP Country Coals
 - CFE-06-10 Information Exchange on LNG Public Education Campaigns
- One project the has not secured funding to date
 - CFE-06-14 Development of Advanced Adsorption Process Technologies for Pre-Combustion Capture of CO₂ in Coal Gasification Processes (IGCC)



Flagship Project



- CFE-06-05 Callide-A Oxy-fuel Demonstration Project
 - **Aim:** Demonstrate the world's first retrofit of oxy-fuel combustion technology to a coal fired power station
 - **Status:** Project to be launched on 14 November 2008 with Ministers from the Australian and Queensland Governments to attend



- **Status:** Refurbishment is to commence in mid-2009, with the refurbished power station expected to be operational from mid-2011
 - Participation: Australia and Japan



Flagship Project



- CFE-06-06 Assessing PCC Technology for Emissions from Coal Fired Power Stations

- **Aim:** Progress the development of PCC technology by using purpose built mobile pilot plants to trial the technology at existing coal fired power stations
- **Status:** Pilot plants commissioned in Australia and China with testing underway
- **Status:** Second Australian pilot plant expected to be established by July 2009
- **Status:** 16-17 October 2008 PCC Science and Technology Seminar held in Australia, including site visit to demonstration site
 - Participation: Australia and China





Project Update



Australian Government

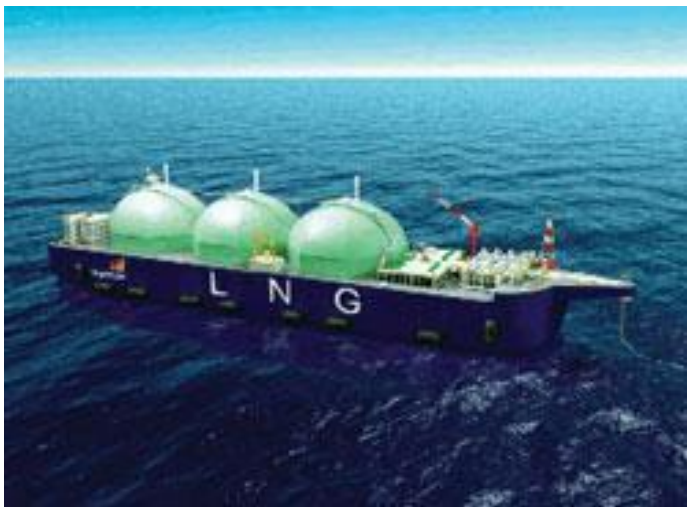
- CFE-06-01 CO2 Capture and Storage Program
 - **Aim:** Capacity building project to transfer technology and knowledge in the field of the geological storage of carbon dioxide
 - **Status:** Full project implementation to commence shortly
 - **Status:** October 2008 Letter of Intent on cooperation signed between Australia and China
 - Participation: Australia, China
- CFE-06-03 Ultra Clean Coal Project
 - **Aim:** To develop and commercialise Ultra Clean Coal (remove all ash) for use in turbines and engines
 - **Status:** A detailed project plan and commercialisation roadmap has been developed.
 - **Status:** 18 month UCC production campaign with trials and testing of UCC in gas and diesel turbines
 - Participation: Australia, USA and China



Project Update



- CFE-06-04 Oxy-fuel Combustion Program and Working Group
 - **Aim:** To facilitate and support the development of oxy-fuel technology through the Oxy-fuel Working Group
 - **Status:** Inaugural meeting held in March 2008
 - **Status:** Reports on oxy-fuel technologies in APP countries and detailed project plan completed
 - **Status:** First OFWG course planned for February 2009
 - Participation: Australia and APP countries



- CFE-06-08 Asia-Pacific Gas Market Growth
 - **Aim:** Develop regional plan to expand LNG investment and trade
 - **Status:** Draft Report outline completed
 - **Status:** Draft recommendations and findings on track for completion next month
 - Participation: Australia and United States



Project Update



Australian Government

- CFE-06-09 Evaluating and Reducing Emissions in Producing, Processing and Transporting Natural Gas
 - **Aim:** Develop consistent and comprehensive internationally accepted methodologies to estimate GHG emissions from LNG facilities, processing, and associated infrastructure
 - **Status:** Draft guidelines have been developed.
 - **Status:** Review Draft Guidelines and incorporate additional data from other APP members
 - Participation: United States and APP countries
- CFE-06-11 Asia Pacific Gas Hydrate Cooperation
 - **Aim:** Share information and conduct cost-shared joint projects to aid gas hydrates to become a viable commercial energy source
 - **Status:** Cooperative arrangements signed
 - **Status:** 6th International Gas Hydrate conference held in Vancouver, Canada, July 6-10, 2008



- Participation: United States and APP countries



- CFE-06-12 Cost & Diffusion Barriers to Low Emission Technologies
 - **Aim:** Develop a methodology to evaluate the cost of electricity and barriers to deployment of emerging low emission technologies
 - **Status:** Final report completed and being printed
 - **Status:** Methodology ready for potential roll-out to APP countries
 - Participation: Australia and United States

- CFE-06-13 Enhanced Coal bed Methane
 - **Aim:** Validate the use of CO₂ injection in coal seams to enhance methane recovery and examine the long-term potential for CO₂ storage
 - **Status:** Planning workshops held in China and Australia
 - **Status:** Project plan developed and currently being refined
 - Participation: Australia, Japan and China



- CFE-07-15 Coal Gasification Performance Assessment Systems for Low Emissions IGCC Systems
 - **Aim:** Undertake a comparative evaluation of the gasification performance of Chinese and Australian coals and produce key data on coal gasification and slag flow behaviour for a range of coal types.
 - **Status:** Project scope being finalised and a formal project agreement being developed between TPRI and CSIRO
 - Participation: Australia and China
- CFE-07-16 Cooperative R&D on Cleaner Fossil Energy
 - **Aim:** Facilitate cooperative arrangements between energy research agencies in Korea and the US to support the development of CO₂ capture technologies through joint research projects
 - **Status:** Formal agreement entered into between Korea and the US
 - Participation: Korea and United States



IGCC Working Group



- Integrated Gasification Combined Cycle (IGCC) Working Group:
 - IGCC technology identified as a priority in the CFE Taskforce Action Plan
 - High level of activity around IGCC studies, workshops and proposed projects
 - A coordinated approach is needed to identify and profile existing projects to examine what further support is needed to accelerate the demonstration and early commercial deployment of IGCC projects
 - Study commissioned on IGCC deployment pathways in APP countries.



Next Steps



- Consolidate existing CFE projects
- Build on the work of the three CFE Working Groups
- Finalise proposed amendments to the Action Plan
- Next CFE Task Force meeting:
 - Proposed to be held in Korea in March 2009
 - Address issues arising from the Joint Task Force meeting

