PROGRESS REPORT
OF THE ENERGY WORKING GROUP (EWG)
EXPERT GROUP ON CLEAN FOSSIL ENERGY (EGCFE)

The Chair of the EGCFE, Mr. Scott Smouse (USA), has provided a summary of Administrative and project activities undertaken by the EGCFE since the EWG31 Meeting.

ADMINISTRATIVE

Support Contractor
Technical support to the EGCFE Chair is provided by Dr. Ian Torrens (USA), through a USDOE site-support contract, for proposal preparation, project implementation and reporting, and development of technical programs for EGCFE seminars and workshops. Also, The Meetings Manager (TMM, Australia) has been contracted for administrative support to the EGCFE Chair and Secretariat, principally support for EGCFE-organized seminars, workshops, and other events. TMM also manages the EGCFE Common Fund.

Common Fund
As of the end of September 2006, the EGCFE Common Fund balance was approximately US$46,818.

Internet Web Site
An update of the EGCFE web site <http://www.apec-egcfe.org/> is continuing with plans to launch the new site by year’s end. Several recent final reports and seminar/workshop proceedings have been uploaded, and additional updates will be posted soon. The site has been managed for several years by Mr. Saengroaj Srisawaskraisorn (Thailand) under contract to the USDOE.

Planning Activities
The EGCFE typically holds two administrative business/planning meetings annually. The first of these meetings this year was held during the APEC Clean Fossil Energy Technical and Policy Seminar in Lampang, Thailand during 22-24 February 2006. Several economies are interested in convening an EGCFE strategic planning meeting but no commitments have been made yet.

PROJECT STATUS

Completed Projects
Potential for Growth of Gas as Clean Energy Source in APEC Developing Economies (EWG 02/2004)
This project follows several earlier natural gas projects implemented by the EWG and the EGCFE and will support the EWG’s Energy Security Initiative, which was endorsed by APEC Leaders at their Bangkok meeting in October 2003. The study is examining expansion of natural gas in APEC developing economies where there is little to no present use of the fuel. An international consultancy team comprising Taylor DeJongh (TDJ, USA) and Resourceslaw International (Australia) is conducting this APEC-funded $80,000-project to which an additional $10,000 was secured from a private sector U.S. firm. The final report for this project has been submitted to the APEC Secretariat and posted to the EGCFE web site.
Following completion of this project, TDJ secured nearly $200,000 from the U.S. Trade and Development Agency to convene a regional natural gas conference to share the study results. Plans are being made to hold the event, possibly in China, in early 2007 in conjunction with the APEC LNG Public Education Workshop.

**Ongoing Projects**

**Carbon Dioxide Capture and Geological Sequestration – Phase III (EWG03/2005T)** – A team led by the Delhi Group (Ottawa, Ontario) with support from the Alberta Research Council (Edmonton, Alberta) prepared training materials on geologic carbon sequestration during Phase II of this multiphase project. To evaluate the training materials and to get feedback on how to improve the materials, a 2-day workshop was held in Seoul, Korea, during January 20-21, 2005, with support from the Australian CO2CRC. The Phase II training program was developed for use throughout the region to educate interested individuals and organizations on the potential to capture and store CO₂ from large fossil fuel-based energy facilities. Phase III of the project will refine the Phase II materials based on feedback from the Seoul workshop and deliver the training materials in at least two additional APEC economies. The project team suggested China and Mexico, and has identified local hosts in both economies. The China workshop is scheduled on 24-25 October 2006, with PEMEX and the Mexican Energy Secretary serving as local hosts and organizers. The Mexico event will be held in Mexico City on 8-9 November 2006, with the China National Petroleum Corporation Research Institute of Petroleum Exploration and Development and the joint China National Petroleum Corporation-Alberta Petroleum Centre serving as local host and organizer.

**APEC Workshop on LNG Public Education (EWG06-2006T)** - The APEC Energy Ministers, at their Sixth Meeting in Manila in June 2004, instructed the EWG to continue its broad-based approach to energy security, which includes initiatives for expanding energy choices in the longer term. In this context, Ministers supported creation of a competitive and transparent marketplace for gas trade and encourage member economies to move towards best practice as identified in the report ‘Facilitating the Development of LNG Trade in the APEC Region.’ They also directed the EWG to continue its work to improve the security of natural gas supply by identifying vulnerabilities, supporting trade promotion, and establishing convenient information links to gas market data available in existing data systems.

In the context of sharing LNG best practices, Chinese Taipei proposed, and the Energy Ministers endorsed at their meeting in Seoul, Korea, last October, an APEC Public Education and Information Sharing Initiative. In support of this initiative, the EGCFE proposed to hold an APEC Workshop on LNG Public Education, which was approved and funded by APEC at US$100,000. Private sector and government officials involved with educating the general public and other government officials prior to the development and during the life of an LNG facility (either a liquefaction shipping or regasification receiving terminal) will be invited to the workshop to share their experiences. The workshop will consist of 1 ½-2 days of presentations and panel discussions followed by a possible site visit to an LNG facility. The Public Education and Training Center at Sun Yat Sen University (SYSU) in Guangzhou, China, has been contacted about possibly serving as the local host for this workshop. The workshop has been tentatively scheduled for early February 2007, in conjunction with the APEC regional natural gas conference mentioned above, but official approval from China’s National Development and Reform Commission (NDRC) is pending.
How Can Environmental Regulations Promote Clean Coal Technology Adoption in APEC Developing Economies? (EWG 05/2006) Coal is expected to account for more than a quarter of new generating capacity in the APEC region during the next two decades. Consequently, to minimize coal’s environmental impacts it is important to employ technologies that increase the efficiency of generation from coal to the maximum extent that is consistent with cost and reliability/operability goals. A number of clean coal technologies (CCTs) have been developed and demonstrated that offer significantly higher efficiencies and lower emissions that conventional technologies that are widely used throughout the region. Others are under development.

Among the factors that can promote the development and early deployment of commercial clean coal technologies are government incentives and effective regulations that protect the environment at acceptable costs to consumers. The objectives of this project are to:

- gather, synthesize, and assess experience to date in developed economies with regard to the interaction of environmental regulations and clean coal technology development
- indicate features of the regulatory environment that can inhibit the development and deployment of CCTs in APEC developing economies where energy needs are expanding rapidly and coal is the fuel of choice
- make recommendations on features of the regulatory environment needed to favor and promote investment in projects using CCTs.

This US$100,000-project will assess and make recommendations on regulations that will promote the use of new clean and efficient coal-fired power generation technologies (i.e., clean coal technologies) resulting in lower emissions of air pollutants. These include nitrogen oxides (NOx), sulphur dioxide (SO2), and particulates, that are currently regulated in many economies; those under consideration for regulation (e.g., fine particulate and mercury); carbon dioxide (CO2), which is of increasing concern owing to its greenhouse gas potential; and production of wastes (e.g., fly ash and slag). In addition, environmental regulations related to water use for power generation in the APEC region will be included. The attributes of CCTs in regard to these pollutants will be summarized, and suggestions will be made on regulations that will promote the uptake of CCTs. The analysis will include the cost implications for these APEC economies, as well as the environmental benefits of implementing the recommended regulations.

A team of Science Applications International Corporation (SAIC) and Atkins China, Ltd. has been selected to conduct this project, which has just begun.

NEXT EGCFE SEMINAR
Planning is underway to hold the next EGCFE Clean Fossil Energy Technical and Policy Seminar in Hanoi, Vietnam during February 2007. The Vietnam National Coal-Mineral Industries Group (VINACOMIN) will serve as the local host with support from the Ministry of Industry.

Also, China has proposed to organize a second 2007 seminar in October in conjunction with the Thermal Power Generation Technology Conference, to be organized by the Thermal Power Chapter of the Chinese Society for Electrical Engineering in Xi’an. This event, which is held every 4 years, is one of the premier Chinese-organized power conferences and attracts several hundred power sector technology experts. This event is under consideration.

PROPOSALS FOR 2007
The EGCFE submitted the five proposals at EWG 31 for funding consideration; the following two projects have been endorsed for funding by the Budget and Management Committee.
1. Lessons Learned in Upgrading & Refurbishing Older Coal-Fired Power Plants: A Best Practice Guide for APEC Developing Economies (Overseer: USA) Requested Funding from Operational Account: US$80,000/Total Project Funding $120,000.

2. Technology Status and Project Development Risks of Advanced Coal Power Generation Technologies in APEC Developing Economies. (Overseer: USA) Requested Funding from TILF Account: US$80,000/Total Project Funding $120,000.