

Minutes of
APEC Expert Group on Energy Efficiency and Conservation Meeting 26
4 – 5 April 2005, Melbourne, Australia

Opening and Welcome Address

The EGEE&C Chair, Dr Fanghei Tsau, introduced the meeting Co-chair, Mr Aidan Storer of the host economy, Australia, who welcomed the participants to Melbourne.

Introductions

The meeting was attended by representatives from Australia; People's Republic of China; Japan; Republic of Korea; Chinese Taipei; and USA, plus observers from Australia, New Zealand and Thailand. A full list is appended.

Adoption of the Agenda

The agenda as proposed by the Chair was adopted without change.

Report on completed projects

1 Sustainable Financing Systems for Energy Efficiency Projects [USA]

The main aim of the project is to develop a specimen set of tender documents that will assist local governments in attracting finance for energy efficiency projects. A key technique is to bundle small projects together, as a single comparatively large loan is easier to obtain than a series of small ones. This project is substantially complete, but has been granted an extension of time until the end of June 2005. The project overseer, Harvey Major, will be completing the formal final report within the next couple of months. The final report with results from the project will be circulated to EGEE&C participants.

2 Workshop on Improving Energy Efficiency in APEC Mining Industry
[Chile; GEMEED and EGEE&C]

This workshop was held in October 2004 in Santiago, Chile. There were around 60 attendees from a majority of APEC member economies. A summary report has been produced and submitted to the first meeting of Ministers Responsible for Mining, and the formal report is being finalised.

In this project, energy efficiency was put in terms of sustainable development and environmental maintenance, analogous to the rehabilitation of mining sites where extraction has finished.

3 Energy Standards and Labelling Information Network [Chinese Taipei, Canada, Australia and New Zealand, Self-Funded]

Dr Peter du Pont, one of the contractors for the project, gave a presentation on the project. During 2004 the tasks were:

- Technical standards outreach and coordination: updating standards, news, reports and links.
- Provision and installation of the new server at ITRI.
- Website operation and programming enhancements, including those associated with the benchmarking exercise for air-conditioners.
- Developing and reporting on international collaboration.

Contributions came from Chinese Taipei, Canada, Australia and New Zealand, plus an amount from CLASP as part of the sponsorship agreement.

Dr Stephen Wiel provided details of the arrangement with CLASP, whereby CLASP developed the programming and structure for coordinated databases that together enable users to search for information on energy efficiency standards for APEC Member Economies and around thirty-six other countries. CLASP will continue to maintain and update the non-APEC data.

A modified website that will work on a new Linux open source operating system has been prepared and is currently on a virtual server; this was demonstrated to the meeting. The new site is more flexible in its format and is not restricted to information on energy performance labelling and minimum energy performance standards but caters for other documents that specify aspects of energy efficiency, such as industry specifications and the Japanese “Top-Runner” requirements.

An official self-funded project proposal to continue the project in 2005 was submitted to EWG29 and endorsed. At present there are contributions from Chinese Taipei and Canada.

As part of the wider project in support of APEC-ESIS, Australia is undertaking a benchmarking study on electric motors in four APEC member economies plus India, and will consider a study on compact fluorescent lamps.

Report on “A Vision for Standards and Labeling Programs”

Mr Shane Holt of Australia reported on this self-funded project that aims to stimulate debate and discussion about an overarching vision and strategy within APEC on energy standards and labelling. A series of workshops (in Melbourne, Turin, Kaohsiung and Asilomar) has been held to find out what everyone is doing and what experts think, to stimulate closer links, to foster inter-regional cooperation, to encourage best practice and to highlight information needs. A draft paper will be circulated for comment in May 2005, and finalised in August 2005 for presentation to EGEE&C 27 the following month.

Presentation by the City of Melbourne: Update on Zero Net Emissions Strategy to 2020

The City of Melbourne is hosting a workshop on April 7-8 on “The New Commercial Building Advantage – an APEC Workshop to Advance Market Transformation”. This is related to the city’s drive towards producing zero net emissions by 2020. The workshop is a modified version of an ‘Integrated Building Design’ workshop that was proposed as an APEC project but did not receive funding. The City of Melbourne modified the proposal which became a self-funded APEC project. The objective is to obtain input from experts in APEC economies, particularly on the issue of creating a market to encourage energy

efficiency building projects. A report from the workshop will be circulated to EGEE&C Members.

Mr. Geoff Lawler, Director, Sustainability and Innovation for the City of Melbourne introduced the zero net emissions strategy, which relates to the 36.5 km² of the central business district. The strategy is therefore mainly addressing the fossil fuel currently used to generate electricity for the mostly commercial and industrial buildings in that area. As the City Council does not itself generate electricity, it does not have any control over the supply side and has to work by influencing the market. An expected result is that the strategy will create a competitive advantage for the City.

The Council is most successful at addressing its own operations. Its current electricity use is mainly for street lighting (55%) and council-owned buildings (40%).

There are three core strategies:

- Leading edge design that will reduce the energy used by new or refurbished buildings — this involves introducing planning requirements for new buildings; a demonstration of leadership by, for example, the new council office building; working with the property sector to advance new building designs and increase the uptake of energy efficiency in existing buildings via retrofits. The Victorian building code will have stringent requirements for improved energy efficiency of buildings.
- Greening the power supply, which involves increasing generation efficiency and also increasing renewable electricity supply by 22%.
- Sequestering residual emissions by tree planting, although at present there is no emissions trading scheme at the national level.

The strategy has set mid-term targets. So far, the Council is on track to meet the targets relating to its own operations, but the municipality as a whole has actually increased its emissions.

Transport energy does not feature in the strategy due to the comparatively small contribution to emissions from transport in the geographical area covered by the strategy.

To obtain a response from building owners and other interests, it has proved necessary to broaden the objectives such as to include water efficiency. It is easier for people to make a connection with water conservation than the more intangible energy efficiency.

In response to a question, it was stated that the achievement of the high efficiency new council building was made easier by the fact that the Council is both developer and user.

Long term economies and business advantage will be achieved by lots of persuasion and by convincing the community to demand low emissions/high efficiency designs.

EWG Secretariat Report of Key Outcomes of EWG 29

- A summary record of EWG 29 was circulated.
- EMM7 Planning — The EWG endorsed the offer from the Republic of Korea to host this meeting on the 12th of October 2005. The agenda is currently being developed.

- EWG Pledge & Review— Members noted the Pledge and Review Consolidated Report and agreed that more detailed information on member economy policies and programmes would be more useful. Members noted that not all economies are reporting and that the EWG endorsed a proposal from Japan to develop guidelines to encourage greater reporting and directed EGEE&C to work with Japan in developing them. Japan suggested that prior to formulating the guidelines it will be necessary to identify the existing problems or barriers that prevent participation in the programme and to get all of them in order. The guidelines may propose that reporting include the programme aim and method; the results of monitoring the programme (if available); barriers encountered; something that might have been done to improve the project; a feature of the project that is particularly recommended. It was suggested by Japan that the Pledge and Review reports to EWG should be made available to EGEE&C.

Discussion & Possible Responses To the Newly-Formed EWG's Energy Efficiency and Renewable Energy Financing Task Force

This newly-formed task force will oversee the implementation of EMM6 recommendations regarding financing energy efficiency and renewable energy projects.

The four steps for action identified are:

- Establish the Task Force (which has been done)
- Use the EWG's Implementation and Facilitation Assistance Team (IFAT) mechanism to help build local commercial capability
- Expand existing databases and information sharing systems to include information on financial aspects
- Develop EWG projects to facilitate financing of energy efficiency and renewable energy projects

Members recognised that EGEE&C (and EGNRET) already have some projects that fit within the theme of the task Force. These should be brought to the attention of the Task Force for their inventory of relevant activities.

The APEC-ESIS database provides a model that could be used for sharing information on financing mechanisms.

EGEE&C can also contribute by analysing its experience to determine the most successful ways of positively influencing financing bodies, and to determine the main aspects to be covered when approaching financing bodies in respect of energy efficiency programmes.

Some information may be elicited from Member Economies via the Pledge and Review process.

Report on Current Projects

1 Energy Efficiency Indicators Workshop (Russia)

This project received emergency funding from the BMC, and the chair thanked the EWG Secretariat and the APEC Secretariat for their assistance. Russia is very keen to hold this workshop and also EGEE&C27 in Moscow during the week September 12-17, 2005. The workshop will include a training element. It will follow-on from the workshop

EWG 03/2001 held in Manila, and will deal more with the collection of data appropriate to the methodology selected.

The Republic of Korea explained that energy indicators can be established according to the purpose of the energy efficiency trend being analysed. Energy efficiency changes can come about through structural change, from a change in energy intensity, from economic activity (increasing the price of finished goods can result in an apparent improvement in terms of GDP per unit of energy). In the case of domestic energy use, weather conditions can have an effect. Therefore it is important what sort of decomposition methodology is used, such as Laspeyre, Paasche, or Divisia indices methodology. After selecting a methodology, we can consider any data collection process that produces a suitable data collection mechanism which can be used to measure the effects on or factors of each indicator.

Dr Peter du Pont mentioned he is currently involved with establishment of a framework for monitoring national energy efficiency targets in South Africa. The monitoring methodology will determine data collection. He will share results from South Africa with the project overseer of the indicators workshop. Other sources of information include IEA and APERC.

2 Energy Standards and Labelling Information Network [Self-Funded]

Chinese Taipei, the project overseer, indicated the work would continue from last year, and in particular:

- Complete the migration to a Linux-based joint database shared with CLASP.
- Undertake benchmarking and coordination of standards for CFLs and the contribution of air-conditioners to peak load.
- Continue with standards update and notification and possibly expand to include WTO notification procedures.

There will be two major updates of the APEC data in ESIS, one soon after the completion of the change to the new operating system and redesigned site, and one prior to EGEE&C 27.

The benchmarking studies will be commissioned by Australia. The CFL study will draw on papers that have been written for the RightLight6 conference (to be held in Shanghai May 9-11, 2005) and on an associated breakout session.

EGEE&C Operation

1 New Project Proposal Format to Comply with APEC Requirements

The streamlined procedure for producing project proposals requires an initial synopsis that is sufficient for EWG to use to rank the projects. Those proposals that the EWG selects to submit to BMC then have full project proposals written (in accordance with APEC project guidelines). BMC usually meet in July, and completed proposals are required a month in advance. The EWG Secretariat will notify project overseers of the actual deadline when this is set.

Members are encouraged to provide input to EGEE&C project proposals.

It is becoming increasingly important that project proposals are linked to APEC priorities and current themes. In particular, TILF projects must demonstrate their TILF linkages. Operational account project proposals have new evaluation criteria; these will be circulated shortly. Project overseers have been encouraged by EWG to consider reducing funding sought from APEC funds, either by reducing the budget or by increasing the self-funded element or both.

Each EGEE&C participant is advised to brief his or her economy's BMC representative on EGEE&C project proposals.

The three EGEE&C proposals that have been selected by the EWG for submission to the APEC BMC this year are:

- Government Sector Energy Management: Best-Practices Inventory and Comparative Analysis to Reduce Government Market Trade Barriers in APEC Economies (Li Tienan, China)
- Information Sharing on Financing Public Sector Energy Efficiency and Renewable Energy Projects (Harvey Major, United States)
- Harmonization of Standards and Labelling for Compact Fluorescent Lamps in Order to Reduce Trade Barriers in APEC Economies (Shane Holt, Australia).

2 Foresighting Future Fuels Technology Road Mapping Workshops

This is a project initiated by the Industrial Science and Technology Working Group, who invited EWG to participate. Scenario planning has resulted in the selection of four fuel types for study: unconventional hydrocarbons, bio-fuels, hydrogen/fuel cells, advanced solar cells and small-scale nuclear technologies. The current phase of the project comprises three workshops. The first, in Vancouver April 27-29, will commence the road-mapping of the fuel technologies, and the results will be refined at a workshop in Chinese Taipei August 10-12 and later finalised at the last workshop in Thailand in December 2005. EGEE&C and EWG Members are invited to the three workshops.

Open Forum (1. Current situations and new developments in your economy; 2. Subjects of particular relevance & interest to your economy)

People's Republic of China

China recently introduced mandatory comparative energy performance labelling for refrigerators and air-conditioners. The label has five grades, with "1" being the best. China now has MEPS applying to 19 products. CECP has 35 products that may apply for energy endorsement labels, and 62 products with water efficiency endorsement labels. CECP has taken over the Efficient Lighting Initiative (ELI) and will run it globally; initially the emphasis of the promotion of the ELI logo will be in Latin America and in Asia. China issued the procurement policy for energy efficient products in December 2004, and it requires that priority be given to products with CECP energy efficiency endorsement labels. China issued the Medium and Long Term Energy Efficiency Plan, and the Government Energy Management Programme was one of ten projects specified in the Plan. The Government Energy Management Programme will be strengthened in 2005.

Japan

The Japanese Government is now preparing an amendment to the Energy Conservation Law to take effect from April 2006. The amended law aims for further promotion of energy efficiency and conservation in factories and workplaces by expanding the number of designated energy management factories (DEMF). The new criterion will be the combined annual consumption of heat and electricity being at a given level or more; the current criterion is based on the annual consumption of heat or electricity. The new DEMFs will be regulated the same as existing ones.

Furthermore, the amended law aims for promotion of energy efficiency and conservation in transport and building sectors; METI (Ministry of Economy, Trade and Industry) and MLIT (Ministry of Land, Infrastructure and Transportation) will cooperate to enforce it. It will be obligatory for transport companies and cargo owners whose transport activity is over a given level to draw up energy conservation plans and report annual energy consumption. Owners of large commercial/residential buildings — those with a floor space of 2,000 m² or more — will be required to report on sufficient energy efficiency measures taken on new construction and large-scale repair.

In addition, the amended law obliges energy supply companies to disseminate information on aspects of energy efficiency, and it will become mandatory for appliance retailers to display details of appliance energy performance.

Republic of Korea

The Republic of Korea's energy intensity was slightly higher than comparable economies, and the Government has enhanced energy efficiency programmes. In particular, implementing the MEPS for induction motors will encourage the increased uptake of high efficiency motors. A standby power programme aims to reduce standby power of office equipment, consumer electronics and white goods to less than 1W. For home appliances the present average standby power is 3.66W, meaning that the average household consumes 306 kWh annually on standby power; nationally standby power accounts for 11% of residential sector electricity consumption.

Korea is hosting an international standby power conference with the theme "Global Cooperation and Standardisation for Standby Power 1W" to be held November 2-3, 2005 in Seoul. EGEE&C participants are asked to identify experts to whom the conference will be relevant and to suggest they attend. Some funding for travel and accommodation is available.

Chinese Taipei

Energy efficiency and increased use of renewable energy in Chinese Taipei is being driven by the Kyoto protocol and the policy of a "Nuclear Free Homeland". A target is to have 10% of electricity supply from renewable energy by 2010.

In February, three Energy Saving Service Teams were established by MOEA to cover industrial, commercial and government sectors. State-owned industries have established their own teams. The ESCO industry is finding that most projects with a payback of longer than three years are not proceeded with. Reference is being made to experience in other economies.

The 2nd National Energy Congress, to be held June 20-21, 2005, will determine national energy policies for the next five to ten years.

United States

The energy efficiency situation in the United States Department of Energy is uncertain, with the post of Assistant Secretary for Energy (Energy Efficiency) currently vacant due to a promotion. A review of the DOE international program is under way.

Australia

Some data that made comparison with other economies suggested that Australia is not doing so well as some other economies. This became a driver for the creation of the National Appliance and Equipment Energy Efficiency Program (NAEEEP) in the mid 1990's. The current 12 product types could increase to up to 50 by 2010, although in many cases it may not be necessary because of voluntary action by suppliers. From 2005, the programme has closer engagement with New Zealand, and potentially will also include Fiji and other Oceanic economies.

Australia is finding that the use of ten year strategies provides industry with greater insight and results in increased acceptance. Plans have been produced for standby power, gas appliances and lighting. These will be joined by plans for hot water systems, industrial products and HVAC systems in 2006. Results of monitoring refrigerator labelling and MEPS show that since the programs began the national overall use of energy by refrigerating appliances has declined despite the number of such appliances doubling.

Australia is also introducing mandatory energy performance requirements for televisions, computers and lighting to take effect from 2006. A government procurement policy to be released mid 2005 will give preference to high efficiency models as listed on www.energyallstars.gov.au.

NAEEEP is one aspect of the National Framework for Energy Efficiency. Another programme requires businesses that consume over 2.5 PJ per year complete an Energy Efficiency Opportunities Assessment that is reported publicly. Implementation is at the discretion of the business. This will affect 250 businesses that represent 60% of energy use.

2005~2006 EGEE&C Operational Plan

Forthcoming events include:

- Indicators workshop and EGEE&C 27, September 12-17 in Moscow; participants are encouraged to consider nominations of both potential trainers and trainees for the workshop.
- Standby power workshop in Seoul, November 2-3, 2005.
- Foresighting Future Fuels Technology Road Mapping Workshops, April 27 – 29, Vancouver; August 10 – 12, Chinese Taipei; December, Thailand.

A website for the Expert group is being set up on the same server as the APEC-ESIS website. The site will contain records of the Expert Group's activities, and will also enable the distribution of meeting documents to be streamlined and more efficient.

The EWG Secretariat reminded that EGEE&C participants may request for the EWG monthly newsletter.

2007 New Project Synopses Submission & Next Meetings

Synopses for 2007 projects will need to be submitted to EWG Secretariat by February 2006 for consideration at EWG 31.

China has offered to host one of the two EGEE&C meetings in 2006, subject to confirmation, and the other 2006 meeting may be held in conjunction with an EGNRET meeting.

Other Business & Acceptance of the Minutes

The chairmanship of the Expert Group has to change next year, as Chinese Taipei will have served two terms by the end of this year. Members were encouraged to consider nominations for the new Chair.

The minutes were reviewed and accepted.

Adjourn

The session ended at approximately 4:50 p.m. The Chair thanked the representatives and observers for coming to Melbourne, Australia for the EGEE&C 26 meeting and declared the meeting closed.

Appendix — List of Participants at EGEE&C 26 Meeting

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