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**Report on the APEC EWG Expert Group on Energy Efficiency and Conservation (EGEE&C)**

**45th APEC Energy Working Group (EWG) Meeting**

**Koh Samui, Thailand**

**20-21 March 2013**

**40th EGEE&C Meeting, Taipei, November 2012**

EGEE&C 40 was held in Taipei from 6-9 November 2012. Other events held prior to the meeting included;

1. A site visit to testing/R&D laboratories for energy using products (including heating ventilation and air conditioning (HVAC) technologies, lighting, and motors).
2. An APEC-sponsored workshop on 7 November relating to the project ***EWG 142011T*** *Energy Performance Evaluation Methodology Development and Promotion in APEC Economies*.

Ten economies were represented at the meeting, including Australia, China, Hong Kong, Japan, Korea, New Zealand, Singapore, Chinese Taipei, Thailand and the US. Participants also include representatives from the APEC Secretariat, APERC, EGNRET, the International Copper Association (ICA, also known as the Copper Alliance)[[1]](#footnote-1), the US-based Underwriters Laboratories, and the US-based Collaborative Labelling and Appliance Standards Program (CLASP)[[2]](#footnote-2).

The EGEE&C agenda included updates on activities of the Expert Group on Energy Data Analysis (EGEDA), the APEC Expert Group on New and Renewable Energy Technologies (EGNRET), APERC Peer Review on Energy Efficiency (PREE) and Cooperative Energy Efficiency Design for Sustainability (CEEDS)and the APEC Subcommittee on Standards and Conformance (SCSC)[[3]](#footnote-3). The meeting also received:

* Updates on two directives to EGEE&C from APEC Energy Ministers (Fukui Declaration, EMM9, 2010) to Strengthen the Energy Standards Information System (ESIS) and implement a Collaborative Assessment of Standards and Testing (CAST)
* Updates on the cross-cutting APEC Smart Grid Initiative (ASGI) and Energy Smart Communities Initiative (ESCI)
* Updates on current & recently completed APEC projects under EGEE&C
* Economy updates on key developments in energy efficiency and conservation policy
* Discussion on prospective APEC and CAST projects in 2013

**EGEE&C Sponsored Concept Notes:**

**EGEE&C lodged two concept notes for consideration for Session 1/2013 funding.**

1. **Assessment of Appliance Testing Capacity and Information Sharing in the APEC Region**  **(Australia)**

The long-term objective of this project is to help APEC economies realise the potential energy savings and GHG emission reductions related to the effective enforcement of Standards & Labelling programs for appliances. This project will help overcome barriers currently faced by Monitoring Verification & Enforcement (MV&E) authorities in APEC economies and identify suitable testing facilities and best practices, and create a network of MV&E authorities that can share information. This project includes data gathering, literature review, interviews with strategic stakeholders, workshops for dissemination purposes, and the creation of the APEC Network of MV&E Authorities for the continuous sharing of experiences, information and development of partnerships. The project seeks to build on the recently completed project “*EWG 07 2010 A – Market Compliance Mechanisms for Energy Efficiency Programmes”*

1. **Building Code Harmonization in Energy Smart Community (China)**

The goal of this project is to enhance mutual understanding of each APEC economy’s building energy code, and to seek a possible way to make an internationally harmonized building energy code or principles that could contribute to increased international trade among building industries as well as developing and improving each member economy’s own code.

***Projects in Progress / Recently Completed***

*EWG 07 2010 A – Market Compliance Mechanisms for Energy Efficiency Programmes*

The project aimed to compile and disseminate information on monitoring, verification and enforcement (MV&E) processes used by regulatory and enforcement agencies to ensure compliance in S&L programs within APEC economies.

Within the APEC region there are a total of 32 energy labelling and 16 minimum energy efficiency standards programs operated by 18 economies. These factors suggest that there is considerable opportunity to develop regional initiatives that will improve the transfer of knowledge and experience amongst economies with respect to energy efficiency S&L programs and their MV&E regimes.

The initial analysis generated 8 key recommendations that were discussed at the project workshop in Beijing in June 2012. The workshop was widely attended and rated that it met expectations. The workshop conclusions focused collaborations between economies to facilitate testing and sharing information reduce costs and improve results.

This project has now been completed and feedback on the final report is welcome.

*EWG 12 2012A – APEC-ASEAN Harmonisation of Energy Efficiency Standing for Air Conditioners: Phase 1 (Japan)*

The objectives of the project are:

1. Form the technical working group who will lead the work on harmonization of standards for testing methods.
2. Make recommendations to the ASEAN EE&C SSN on harmonization of standards for testing methods.
3. Make recommendations to APEC EGEEC on ways forward for the harmonization of standards for testing methods across APEC economies.

The project has now identified a consultant to progress the deliverables along with the Technical and Policy Working Groups towards the standards development. The kick off meeting for the TWG and PWG are being organised. This will be followed by a review of the current standards.

*EWG 13 2012A – Energy Saving Window Thermal Performance Simulation Training (Thailand)*

The objectives for this project are to:

* Collaborate working on an APEC pilot test case that can be replicated throughout APEC by participating in the establishment of the first APEC regional energy efficient testing and rating centre, where building envelope energy saving opportunities will be taught and implemented
* Revise APEC economy building energy saving strategies to include internationally recognized energy saving ratings methods
* Build basic capacity and share APEC economy building envelope energy savings successes

The project is progressing with the cooperation of 4 parties, DEDE, US DOE, KMUTT, and a US Consultant. The workshop was initially scheduled for September 2012, however this was too optimistic as the project was not approved until July 2012. It is scheduled to take place in February 2013.

*EWG 14 2012 A – Workshop to support the development of national design lighting centres in APEC. (US)*

This project will support a workshop that would bring together representatives from successful lighting design centres and leading researchers and government representatives from APEC member economies. The workshop will be targeted at both the presentation of best practices and the definition of the next steps forward in the development of national lighting design centres in multiple APEC member economies.

This workshop will demonstrate the effectiveness of best practice design and technology in addressing lighting efficiency goals and how lighting centres can be an effective approach to accelerating the process of energy-efficient lighting

The workshop is currently scheduled to take place in Thailand alongside the EGEE&C 42 meeting late 2013.

*EWG 15 2012A – APEC distribution transformer survey: Estimate of energy savings potential from mandatory efficiency standards (China)*

The key objective for this project is:

* Increase awareness among APEC economies about the energy savings and GHG emission reduction potential from an increased share of higher efficiency distribution transformers, as well as to provide APEC economies with recommendations on how to increase the market share of higher efficiency distribution transformers.

The project is progressing and looking to disseminate the final survey results and analysis in a workshop towards the end of 2013.

*EWG 08 2012 Urban development smart grid roadmaps: Christchurch recovery project (New Zealand) (with EGNRET)*

The objective of the project is to develop a ‘Road’ Map’ for developing a ‘smart electricity grid’ in Christchurch that will deliver the maximum social, environmental and economic benefits to the city. Specifically looking at practical steps to be taken towards establishing smart electricity in a rebuild/recovery setting identifying:

* Technologies recommended to be installed in new buildings
* Requirements for systems to be put in place by the electricity distributor and retailing companies
* Regulatory needs and steps to be taken

The project has now established a steering group formed with Transpower (New Zealand’s transmission company), the New Zealand’s Ministry of Business, Innovations and Employment, and the Electricity Authority (electricity market regulator).

A consultant was appointed late January and work has commenced with the first round of stakeholder consultation. A draft report is expected around late April to be distributed for comment.

*EWG 01 2011T - Engagement by APEC economies in smart appliance standards (Australia)*

This project is now completed following the Smart Appliance Standards Workshop which was held on 10-11 November 2011 in South Korea.

The publication of the papers and the Communiqué from the Seoul workshop at <http://www.egeec.apec.org/www/egeec/webnews.php?DomainID=17&NewsID=223> are available and many interested parties have contacted us as a result.

At the time of the Workshop there was no international framework for the development of Smart Appliance Standards, so there was some discussion about how these could be advanced. In early 2012 the IEC established two processes related to smart appliances, PC118 and TC59/WG15.

PC 118 'Smart Grid User Interface' first met in Tianjin, China in February 2012, which included 5 APEC economies including China, USA, Japan, Australia, Korea). It established two working groups (WG)s:

1. Interface between demand-side smart equipment and the grid (co-convenors from China and France); and

2. Demand response (co-convenors from China and USA).

The Scope of PC118 is “*Standardization in the field of information exchange for demand response and in connecting demand side equipment and/or systems into the smart grid*”. The membership of PC118 is very broad, including several APEC countries.

IEC TC59 Working Group 15 ‘Connection of household appliances to smart grids and appliances interaction’ (TC59/WG15) first met in Oslo in October 2012. The Convenor is from Italy with membership from Japan, Germany, USA, China, Turkey and Australia (i.e. 4 APEC member states). The WG resolved to commence drafting a Technical Specification on Smart Appliances. This is an IEC document that does not have the status of a Standard, and has a limited life: 3 years from approval, plus a further 3 years if approved. The document can be transformed into a full Standard at any time, subject to the usual approval processes. It is proposed to complete the document by October 2013. It is likely that it will accommodate a range of existing approaches, including AS/NZS 4755.

Work is also progressing on Australian and New Zealand Standards AS/NZS 4755 'Demand Response for Electrical Products.'  Two parts were published in May 2012 - for air conditioners (a revision of the original 2008 publication) and for swimming pool pump controllers. Two further parts are at an advanced stage of drafting - for electric/heat pump/solar water heaters, and for electric vehicle charge/discharge controllers.

In March 2012 Australia recommended to the EGEE&C Secretariat that continued reporting on progress on IEC from participating economies to EGEE&C could continue but we do not intend to generate a new project on this within APEC for the time being. Given the number of APEC members states now involved in the IEC processes, it is may now be less urgent to maintain a separate APEC Smart Appliance initiative

*EWG 14 2011T – Energy Performance Evaluation Methodology Development and Promotion in APEC Economies (China)*

*The key objectives for this project are:*

* Enhance experiences and resources sharing and cooperation in APEC economies in terms of energy performance evaluation and EnMS promotion;
* Develop typical and comprehensive energy performance indicators and evaluation methodology for industrial enterprises, deliver best practices case studies, and provide technical reference for APEC economies to initiate or improve their own energy performance evaluation programs;
* Under APEC framework, propose a harmonized approach and implementation recommendations for energy performance evaluation, to reduce the possible green trade barriers that may be induced.

The project has now been completed as the research, analysis and workshop have now been completed

Following the workshop the PO accepted direct feedback and commentary following the workshop which was used to improve the final report. The final report was submitted and endorsement.

The project has recently been completed.

*EWG 19 11A Best Practices in Energy Efficiency and Renewable Energy Technologies in the Industrial Sector in APEC Region (Joint EGNRET/EGEE&C) (Thailand)*

The full proposal for this project (total cost USED$75,000) was approved in Session 3, 2012 and the project was due for completion in mid-December 2012. The project will highlight best practices in the use of EE & RE in the APEC industrial sector using case studies from co-sponsoring economies such as the US, Japan, Korea, and Indonesia; produce a report identifying technology options and barriers to their adoption and identifying best practices; and support development of an industrial sector roadmap for the uptake of EE & RE technologies in the region.

The project in advanced stages of progress with the final project reports currently in progress.

***Self-funded project:*** *APEC Workshop for the Promotion and application of LED Technology (Chinese Taipei)*

The key objectives for the workshop:

* Sharing Chinese Taipei’s experience of the promotion for LED lighting by public works and demonstration projects with APEC Member States.
* Learning from experience of other APEC economies in order to refine the strategy of LED lighting industry in Chinese Taipei.

The workshop was held in October 2012 and attended by 175 delegates and had presentations from six APEC economies.

Key conclusions of the workshop included:

1. There is a need to set up energy efficiency standards and testing standards for LED technology in the APEC region. This may result in cost reduction and market expansion.
2. It would be beneficial to create a technology and experience sharing process to avoid costly technological overlap, streamlining the development process.

**Upcoming events**

A number of events are planned with the intention of aligning them to the EGEE&C meetings in 2013. The events include:

* CAST Workshops on heat-pump water heaters. These are 2 half day workshops aimed to be aligned with each of the two EGEE&C meetings in 2013
* US Lighting Design workshop. This is a 2 day workshop aimed to be aligned with the second meeting in 2013.
* China distribution transformer workshop. Also a two day event aimed to be aligned with the second 2013 EGEE&C meeting.
* Japan Air Conditioner Harmonization workshop. A half-day workshop to be held with the second 2013 EGEE&C meeting.

 **EGEE&C 41**

EGEE&C 41 will be held in Beijing, China from the 11 to 13 April 2013

1. The ICA is partnering with EGEE&C (as well as EGNRET) on a number of projects relating to common interests. [↑](#footnote-ref-1)
2. CLASP administers the APEC Energy Standards Information System (ESIS) and the APEC Collaborative Assessment of Standards and Testing (CAST) initiative, both of which relate to directives from the Fukui declaration at EMM9. [↑](#footnote-ref-2)
3. SCSC, which reports to the APEC Committee on Trade and Investment (CTI), shares a common interest with EGEE&C in promoting regional cooperation to develop, align and enforce energy efficiency standards. [↑](#footnote-ref-3)