**37th Meeting of the APEC Expert Group on Energy Efficiency and Conservation (EGEE&C)**

**28 February to 2 March 2011**

**Draft Minutes**

***The Ronald Reagan Convention Center, Washington DC, USA***

**DAY ONE OF THE MEETING**

**Session 1 – Welcome and Introduction**

Participants were welcomed to the meeting and the agenda was adopted. The meeting opened with updates representatives of other fora.

*Variations to the agenda:*

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| --- | --- |
| Day 1, Sessions 3, 4 and 5 | * The sequence of items 3-2 and 3-3 was reversed
* The topics listed under Session 4 were discussed during Sessions 3 and 5 (Session 4 did not occur as a separate item)
* The topics listed under Item 5.2 were discussed during Session 3 and Item 5.1 (Session 5-2 did not occur as a separate item)
* Discussion on the topics in Sessions 3 to 5 was revisited in the afternoon on Day 2 of the meeting (following the economy presentations)
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| Day 2, Sessions 7, 8 and 9 | * Sessions 7 to 9 occurred on Day 3, Session 2 (Session 2 was extra time allocated for unfinished business from previous days)
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**Session 2 – Updates on Other Fora**

**2-1 – Subcommittee on Standards and Conformance (SCSC) Update**

An SCSC representative updated meeting participants on the group and its activities.

SCSC meets twice a year. Its members are drawn from agencies responsible for standards and conformance and trade policy. It reports to the Committee on Trade and Investment (CTI). Its objectives include to:

* reduce negative effects on trade due to different standards, technical regulations and conformity assessment procedures
* promote open regionalism and market driven economic interdependence
* promote alignment of national standards with international standards
* promote consistency of approaches and mutual recognition principles with respect to conformity assessment
* promote good regulatory practice.

During APEC 2011 USA, SCSC is contributing to the priorities of strengthening regional economic integration and expanding trade; promoting green growth (including trade in environmental goods and services); and expanding regulatory cooperation and advancing regulatory convergence.

*SCSC projects relating to EGEE&C issues*

The Committee of Trade and Investment – Advanced Regulatory Cooperation Mechanism is currently considering an SCSC proposal on smart grids which, if selected, will result in a smart-grids related event during SOM 2 in Big Sky, Montana on May 13 2011.

The SCSC will hold two energy-related events during SOM 3 in San Francisco, alongside the Ministerial Meeting on Energy planned for SOM 3:

* A two day workshop to prepare businesses and regulators for ISO 50001 standard for energy management to be published in 2011. (ISO 15001 underpins the Clean Energy Ministers’ Global Superior Energy Performance initiative.)
* A workshop on solar technologies will present the results of a survey on current standards and conformance regimes and provide a forum to share experiences on implementing solar technologies. A subsequent workshop is planned to focus on the reliability and durability of PV materials.

***ACTION: Further information on energy-efficiency related SCSC events will be shared through the EGEE&C Secretariat***.

The SCSC has also put forward a proposal to hold an Information & Communications Technology (ICT) conference to work towards alignment of standards during SOM 3. This was not awarded funding in the first round of APEC project approvals in 2011 but the proponents are seeking funding in round 2.

**2-2 – International Copper Association (ICA)**

A representative from ICA gave an update on their energy efficiency and conservation programmes.

ICA promotes the use of copper at the end-use level worldwide, on behalf of its 39 members, which include 10 of the world’s largest copper & copper alloy fabricators. With a head office in New York, it operates out of 31 offices in 24 economies, including the following APEC member economies: China, Singapore, Australia, Japan, Brazil, Mexico, and Chile.

ICA promotes higher efficiency in electrical and thermal energy applications that copper (being the most efficient metal in terms of thermal and electrical conductivity) is used in. It does this through promoting and supporting standards and policies development, supporting equipment manufactures, educating end users, and through other market mechanisms.

ICA’s interests lie in the following areas:

* Motor driven system & CHP
* Street lighting
* Building energy management
* Energy efficient appliances
* Transmission & distribution system

Various ICA projects receive co-funding from partners such as the United Nations Environment Programme and the European Council.

The ICA representative outlined a range of projects ICA is supporting, with a particular focus on:

* A project to promote higher efficiency power and **distribution transformers** for which guidelines and a selection tool are being developed in preparation for training programmes due to commence in late 2011 (a related workshop may occur alongside EGEE&C 28 Seoul, Korea in the first week of November)
* Carbon finance for high efficiency **electric motors** in industry – This project involves engagement of a private investor to provide high efficiency motors (HEMs) with discount equivalent to revenues from carbon credits, to bring price of HEMs at same or lower level than inefficient motors
* Implementation of an **energy management** training and certification system, in line with the new ISO standard ISO 50001

**Cooperation with APEC** - ICA can offer support to projects promoting energy efficiency, including technical support; resources to conduct studies; capacity building and technical assistance programmes; and, in some cases, financial support.

**Session 3 – Update on ESIS and related activities**

The APEC Energy Standards Information System (ESIS) is a website that lists energy efficiency standards and labels that apply to products in various APEC economies. The Collaborative Labelling and Appliance Standards Program (CLASP) manages ESIS on behalf of EGEE&C, alongside its own global standards and labelling website. The two websites share a common database. CLASP works with key economy contacts in APEC economies to keep information up-to-date for those economies.

**3-1 – Mapping Exercise Outcomes**

A representative for Japan updated the group on the outcomes of a project to map energy efficiency standards in APEC economies, using data on the ESIS website. ESIS was updated extensively in order to carry out the mapping exercise. The purpose of the mapping exercise was to reduce barriers to trade in environmental goods and services (energy efficient appliances) by:

* assessing the coverage of standards in the region for key energy-using appliances
* assessing the level of convergence and divergence between these standards
* identifying opportunities to extend coverage of standards and to align standards more closely.

The mapping exercise report recommended that further, in-depth research be carried out to assess the nature and extent of convergences and divergences in test standards and conformity assessment activities in APEC economies and relevant international organisations, and to recommend ways for APEC economies to align more closely in these areas.

The EGEE&C Chair supported the recommendation and said that carrying out more detailed analysis of divergence in test methods, and identifying a pathway for closer alignment, would allow for an APEC-wide position to be promoted within international standards development fora.

The Chair also emphasised the need to be alert to ‘quick wins’, i.e. eliminating, or applying mutual recognition principles to, small variances in standards that do not have a material impact on test results.

He also noted the need to consider the investment that laboratories have made in testing to existing standards when considering making changes to standards to align them more closely.

Participants noted other reports that should be consulted to inform decisions on the next steps to act on the mapping exercise recommendations, namely:

* A CLASP report that identified harmonisation potential in five economies for certain key appliances. The report has less breadth but more depth than the mapping exercise. It looks at the different technologies and performance levels prevalent in the featured economies, and analyses the differences in test procedures and their application
* The IEA 4E Mapping and Benchmarking study for heating and cooling appliances

It was noted that these recommendations complement directions from APEC Energy Ministers to “conduct a series of Collaborative Assessments of Standards and Testing (CAST) for the energy-intensive appliances identified by CEEDS in cooperation with the Renewables and Efficiency Deployment Initiative (Climate REDI) of the Major Economies Forum (MEF)”. It was also noted that the key appliances in the mapping exercise are broadly consistent with energy-intensive appliances identified by CEEDS.

**3-3 – Update on SEAD and “superefficient.org”**

A US Department on Energy representative who is working on the Super Efficient Appliance Deployment (SEAD) initiative gave a presentation to EGEE&C.

SEAD is an initiative of the Major Economies Forum – Clean Energy Ministerial and the International Partnership on Energy Efficiency Cooperation (IPEEC).

SEAD is a global market transformation initiativefor deploying super-efficient equipment and appliances. Five work-streams have been established:

* Cross-cutting technical analysis and R&D coordination
* Global energy efficiency awards
* Incentives
* Standards & test procedure coordination
* Procurement

The Clean Energy Ministerial (CEM) and IPEEC seek to collaborate with other international fora such as APEC and ASEAN in order to engage a wider range of economies in SEAD activities and utilise existing projects and resources to achieve SEAD objectives.

The ‘superefficient.org’ website is a key deliverable under SEAD. The US is hosting this website on behalf of all participating economies.

The purpose of the website is to create a web presence for SEAD and to serve as ‘the global portal’ for information on standards and labelling worldwide – existing and in development. The website is due to be launched on 5 April in time for the second Clean Energy Ministerial and will be integrated with the CLASP website from July 2011. The features of “superefficient.org” will include:

* Contact with a network of experts via the website
* Subscription service for latest news
* Best practice policy resources
* Access to a ‘solutions centre’ (which will serve all SEAD initiatives)
* Social media presence live and online from December 19 2011

There is scope to partner with other international/regional forums, such as APEC and ASEAN, via the superefficient website. In particular, SEAD partners see a key opportunity to cooperate with APEC ESIS. This scope of APEC/SEAD collaboration was discussed further in the item on Climate REDI funding (see below).

**Session 3-2 – Update on the APEC Energy Standards Information System (APEC ESIS)**

A representative of the Collaborative Labelling and Appliance Standards Program (CLASP), who manage ESIS on behalf of EGEE&C, updated the group.

Last year, USD $16,000 in funding was committed to ESIS (APEC’s online database for standards and labelling) from Korea, Chinese Taipei and New Zealand. The CLASP/ESIS representative thanked these economies for their contributions and invited more economies to come forward with contributions towards maintaining the website. Additional funds of USD $6,900 are needed to meet existing contractual obligations with IIEC, the current service provider.

**ACTION: EGEE&C economy representatives are asked to consult their decision-makers about possible funding contributions to help meet existing contractual obligations for ESIS.**

The existing contract with IIEC elapses in August 2011, at which point decisions need to be made on how ESIS will be managed in the future, and by whom. With respect to its own global database for standards and labelling, CLASP is preparing to change its web management company from IIEC to Agency Q in April 2011. Previously the ESIS and CLASP websites have operated off one server managed by IIEC.

The CLASP/ESIS representative tabled a range of options and associated costs for maintaining ESIS when CLASP migrates to a new server and the current contract with IIEC elapses.

CLASP does not recommend maintaining two separate databases for CLASP and ESIS, as this would be the more expensive option in the long term, and because of the risks and inefficiencies associated with maintaining two separate databases that have overlapping information.

An alternative option is for APEC economy data to be kept up-to-date on the CLASP database and for CLASP staff to maintain contact with APEC key economy contacts for ESIS to facilitate this.

A key concern for EGEE&C representatives is how ESIS could maintain an online presence under this option. SEAD and CLASP representatives had a possible solution to this, which was discussed in more detail during the ensuing meeting item on Climate REDI funding (see below).

The Chair asked participants to review the tabled ‘maintenance of ESIS’ options overnight and prepare to put forward their views on Day Two of EGEE&C 37.

***Discussion on improving the service provided by ESIS***

A number of meeting participants felt that the ESIS update process should be streamlined. For instance:

* Duplication could be minimised if ESIS provides only high-level information on standards used in the region and directs users to other (economy-specific) websites for more detail on the content and scope of those standards
* A data entry template would make it easier for key economy contacts to provide updates and would improve the consistency of information on the website.
* There was support for providing overviews of each economy’s work plan and timelines for standards development, and updating these.

**Session 5 – How CAST & ESIS link to SEAD & Climate REDI**

**5-1 – Climate REDI funding for “Strengthening ESIS” and conducting a “Collaborative Assessment of Standards and Testing (CAST)”**

SEAD representatives from the US Department of Energy (US DOE) took part in this discussion.

“Strengthening ESIS” and conducting “CAST” are instructions to EGEE&C from the APEC Energy Ministers’ Fukui Declaration at EMM9 (the Ninth Meeting of APEC Energy Ministers).

As a key funding contributor to the international SEAD initiative, the US has pledged Climate REDI funding (USD $200,000 per annum over five years) towards these two initiatives, as they complement SEAD objectives.

As the agency responsible for arranging this funding, the US DOE is keen to ensure it is used to maximum effect. US DOE suggests that, with respect to “Strengthening ESIS” funding, efficiencies could be gained from migrating APEC ESIS data and functionality to the CLASP and superefficient websites. An “APEC ESIS” page could be hosted on the CLASP website to maintain an online presence for APEC ESIS, with the APEC ESIS S&L database available on both the CLASP and superefficient websites. This could be done at no cost and would free up resource to spend on data collection and networking activities in the APEC region. **Minute of decision:** **It was confirmed that Climate REDI funding could funding be used towards migrating ESIS (if this becomes necessary when CLASP’s website is migrated).**

***Discussion***

**STRENGTHENING ESIS**

EGEE&C participants wanted to know:

* How ESIS would be maintained in the longer term under this scenario (for example, if the superefficient website was discontinued in the future)
* Specifically what expenses would be required to maintain ESIS if there was no longer a separate website and database to maintain
* What role CLASP would play with respect to ESIS under this scenario.

**COLLABORATIVE ASSESSMENT OF STANDARDS AND TESTING (CAST)**

Participants sought clarity on the background to the CAST initiative announced as part of the Fukui Declaration at the Ninth Meeting of APEC Energy Ministers (EMM9). Specifically, clarity was sought on:

* What steps are required for EGEE&C to implement CAST
* What products are covered by CAST
* How CAST, and in particular activities funded through “Climate REDI”, will build on/complement existing EGEE&C projects underway to harmonise standards
* Whether to proceed with recommendations to commence with LED lighting as the ‘pilot product’ for CAST (given that this is an emerging technology and there is more of a proliferation of standards for other types of products at this stage)

**CONSENSUS VIEW**: The consensus view was that CAST is an initiative to align test standards more closely for the key products identified in the “APEC mapping exercise for energy efficiency products” (which drew on APEC CEEDS and other multi-economy initiatives to identify key products).

A two-step process is envisaged to achieve this objective:

1. Determine the nature and extent of differences between test methods, and the impact of these differences (in terms of barriers to trade)
2. Identify steps to overcome key differences and put these into action.

It was agreed to continue discussion on these issues in Day Two of the Meeting.

**DAY TWO OF THE MEETING**

**Morning: Session on Compliance**

**Session 1 – Welcome & Introduction, Adoption of Agenda**

Participants were welcomed to the meeting and the agenda was adopted. It was noted that the discussion from Day 1 on the ESIS website options would be revisited in the afternoon and that, if required, items from Day 2’s agenda could be completed on Day 3 of the meeting.

**Session 2 – APEC Survey of Market Compliance Mechanisms**

The US is sponsoring a project EWG 072010A Market Compliance Mechanisms, to survey approaches to compliance for energy efficiency programmes in APEC economies and identify best practices. This project is in the early stages of implementation. A request for proposal was put out and only one tender received. The tendering agency was not deemed qualified to deliver the project so the project will need to go out to tender again.

The US representative asked for help from EGEE&C members to solicit additional bids for this proposal. The bid will reopen for about another month – until the end of April 2011 or thereabouts.

Reference was made to a study on compliance by Pacific Northwest Laboratories (PNL) in the US. This would be a useful point of reference for the APEC Survey of Market Compliance Mechanisms, and a useful reference for EGEE&C members.

***ACTION: EGEE&C Secretariat to obtain link to this study on compliance by PNL and pass on to EGEE&C representatives***

***ACTION: EGEE&C Secretariat to request EGEE&C representatives to solicit additional bids for the “Market Compliance Mechanisms” RfP***

**Session 3 – CLASP handbook on Monitoring Verification and Enforcement (MVE)**

*(This was actually given after the economy presentations – but is included in these minutes in the same sequence as the agenda)*

The CLASP/ESIS representative gave the group an overview of this handbook commissioned and published by CLASP.

The handbook provides guidance on ensuring good compliance outcomes through such activities as market surveillance, verification testing, enforcement, communications, legislative framework, budget, and continual programme evaluation.

Compliance has become a more significant issue recently as standards and labelling programmes in various economies reach maturity. However, there is currently no common terminology for “MVE” and little literature on the subject. Programmes tend to lack ready information on their compliance activities, such as the cost they incur, the market share of models that are tested and found to be non-compliant, and records on compliance and enforcement activities.

Key insights from this handbook include:

* A good compliance rate is essential in order to accurately measure energy savings and emission reductions from a standards and labelling (or other) programme
* A good compliance record will give consumers and stakeholders confidence in a programme’s credibility and will reward companies that invest in more efficient equipment.
* In order for a programme to achieve a good compliance rate, the risks of non-compliance must be seen by businesses to outweigh the benefits, and compliance activities & outcomes need to be publicised more
* Economies would benefit from sharing testing and compliance data to identify non-compliant manufacturers common to each other’s markets

***Discussion***

A representative for China (the Vice Chair) noted that China plans to host a compliance training programme in the next 2-3 years. He would like to cooperate with CLASP to prepare training material utilising CLASP’s MVE handbook.

**Session 4 and 5 – Economy presentations and plenary discussion**

Economy representatives at the meeting gave presentations on the types of compliance activities carried out for energy efficiency programmes in their economy.

This was a highly informative session that generated a lot of discussion. A rough estimate was made that the economies seated around the table spent in excess of USD 10M on compliance.

There was discussion about how economies could work together to reduce compliance costs and improve the effectiveness of compliance, e.g.:

* sharing information on non-compliant products/manufacturers between economies
* coordinating testing activities between economies
* using ESIS as a forum for compliance issues
* building capacity and transferring knowledge between economies.

It was suggested that compliance could be the focus of an upcoming CEEDS workshop.

**ACTION: Secretariat to pass on to APERC the suggestion that compliance for energy efficiency programmes could be a useful focus for future CEEDS workshops.**

Meeting participants would like the topic of compliance be revisited in future economy updates at EGEE&C. The topic of assessing compliance with thermal envelope performance in commercial buildings was proposed for economy presentations at EGEE&C 38.

**ACTION: Compliance with commercial building envelopes to be adopted as the theme for economy updates at EGEE&C 38, pending support from EGEE&C members**

There was also discussion on the merits of establishing a regional compliance forum. This could be used to maintain an ongoing dialogue on compliance in the region and identify and promote opportunities for regional coordination.

**Afternoon: Session on EGEE&C Projects**

**Extra session: Revisiting options for maintaining ESIS (continued from Day 1)**

This discussion continued on from the previous day’s presentation on several options for maintaining ESIS, and their associated costs. CLASP presented its recommended option.

CLASP, as a working partner with both EGEE&C (for ESIS) and SEAD (for superefficient.org) recommended the following:

1/ There is no longer a separate website maintained for ESIS. Instead:

* A webpage dedicated to ESIS is hosted on either SEAD’s superefficient.org website or CLASP’s website.
* The webpage provides a background on ESIS and lists APEC economies and key economy contacts.
* Users can click on an APEC economy and retrieve S&L data for that economy, which is drawn from the CLASP database.
* A long-term management plan is put in place to safeguard the maintenance of the ESIS page and ESIS data in the long term.

2/ Existing arrangements still apply for collecting ‘APEC ESIS’ data (i.e. data on standards and labelling in the APEC region).

* CLASP liaises with APEC key economy contacts to maintain up-to-date information.
* CLASP reduces workload for key economy contacts by drafting updates to content for them to check
* Data entry templates are provided to key economy contacts to ensure the right information is provided at the right level of detail, and to maintain the consistency of data
* Data collected for APEC ESIS is used to maintain an up-to-date data set for the APEC region and to update the CLASP global standards and labelling database.

3/ Keeping ESIS and CLASP data linked to a single database allows ESIS users and stakeholders to benefit from the enhanced features available via the CLASP website once it is migrated to the new server (under Agency Q).

4/ ESIS users will be able to access the new CLASP search engine to search for data on CLASP’s global S&L database (including all ‘APEC ESIS’ data) in a number of different ways (by economy, by product, etc.).

5/ As discussed by SEAD representatives the previous day, an online link can be established between APEC ESIS project and the SEAD project. The SEAD ‘superefficient’ website can be used to raise awareness of APEC ESIS.

6/ Among all the options for maintaining ESIS presented by CLASP the previous day, the recommended option is the most cost effective in the longer term.

**Discussion**

The following key concerns were raised or reiterated in discussion on the recommended option:

* The preferred solution must safeguard the long-term continuation of ESIS, or the work done under ESIS
* The preferred solution must maintain an ongoing web presence on standards & labelling activities in APEC economies
* The preferred solution must allow for APEC economies to contribute funding and information to ESIS – this could become more difficult if the website used for ESIS is hosted by a specific economy such as the US
* The preferred solution needs to clarify what funding would be required to maintain ESIS (in addition to the contribution from Climate REDI) and what this would be spent on
* EGEE&C needs to clarify whether the APEC logo can be used on non-APEC websites, such as ‘superefficient.org’ and CLASP.

***Minute of decision: General consensus on how to proceed with options for ESIS could not be reached at the meeting, due to the need to clarify key issues.***

***ACTION: The Chair will take up the discussion on options for ESIS out-of-session with SEAD contacts, CLASP, the EWG Secretariat and the APEC Secretariat and report back to the group with a recommended way forward prior to the next EWG meeting in May 2011.***

**Session 6 – Proposals for 2011**

*A presentation on an existing project was allowed to go first, ahead of updates on proposals,, to accommodate the presenter’s schedule.*

**Update on EWG 13/2009A Energy Efficient Windows (project in progress)**

A representative of the National Fenestration Rating Council updated the group on this project.

The study surveys activities to promote energy saving windows in APEC economies. It identifies:

* Mature policies, such as codes and specific energy rating methods for windows
* Developing policies, such as wall energy performance (generic calculation of heat transmission for a wall)
* Interim policies, for instance where there are no ratings in place for windows, and where there are prescriptive requirements in the building code but the calculation method is open
* Initial policies – where there are no energy requirements in place under the building code.

Recommendations being made under the study include for economies with mature policies to increase/improve enforcement activities, and for other economies to consider a) adopting existing systems to test and model window energy performance (this will reduce the need to set up a unique compliance infrastructure), and b) introducing rating systems for windows.

***Discussion***

Korea noted that it is due to include glass and window frames into its energy rating programme from 2012.

**New proposal from Australia on Demand response**

Australia submitted a concept note for a proposal “Engagement by APEC Economies in International ‘Smart Appliance’ Standards for Air Conditioners and Other Appliances”. The concept note was co-sponsored by the US, Chinese Taipei and New Zealand.

This project will facilitate APEC input into international demand response standards.

Australia recognises the potential of smart grids and smart appliances to help reduce peak energy load in all APEC economies. It sees that common communication protocols are necessary to promote the uptake of, and to prevent barriers to trade in, smart appliances. In addition, common protocols for electric vehicles will facilitate their connection to the grid and help to promote their uptake.

Smart (i.e. demand response enabled) appliances can reduce their energy use during peak load by adjusting their power output in response to a signal from a smart meter (or similar device).

Cost benefit analysis in Australia indicates that a combination of smart metering, dynamic energy pricing and smart (demand response enabled) appliances could achieve a large reduction in substation peak loads (savings worth up to AUD $13.6 billion by 2025 – or $170 per household per year) and could reduce network capital investment by a third.

Australia proposes to hold a workshop somewhere in Asia in late 2011. The workshop would inform APEC stakeholders on progress with standards development for “smart appliances” – both internationally and in individual economies. The workshop outcome would be to identify issues specific to the region that need to be accounted for in international standards development, and to engage APEC stakeholders in international standards development.

***Discussion***:

A US representative noted other strategies (besides demand response capabilities) can be adopted to reduce cooling load at times of peak demand,.

**New proposal from China on Energy performance evaluation**

China submitted a concept note for “Energy Performance Evaluation Methodology Development and Promotion in APEC Economies”, which is cosponsored by Chinese Taipei and New Zealand.

An ISO standard for energy management is due to be published in the 3rd quarter of 2011. APEC economies are recommended to take a harmonised approach to implementing the standard. To achieve this, a common methodology is recommended for businesses to report on their energy performance.

China proposes to hold a workshop on implementation of the standard some time in the next 10 months or so. The workshop will provide an opportunity for participating economies to share best practices and establish or improve their own energy performance evaluation systems. It will also promote a harmonised approach to energy performance evaluation in the APEC region, to prevent possible barriers to trade in environmental goods and services.

***Discussion***:

A representative from Japan noted that a separate ISO standard is currently under development for the iron and steel industry, as part of an evolving approach to develop sector-specific indicators for energy performance.

**New Self-Funded proposal from the US** **– Efficient Building Envelope Workshop**

The US representative tabled a self-funded proposal “APEC Efficient Building Envelope Stakeholders Meeting and Workshop” and sought expressions of interest from other economies.

The project would support a two-day workshop and conference held in Thailand and attended by a range of public, private and academic sector stakeholders involved in developing advanced building material infrastructure in the APEC region.

This workshop addresses a need identified during the CEEDS Phase 2 project (which aimed to build regional energy efficiency capacity in the buildings sector). The workshop would build capacity in Thailand and neighbouring economies (plus other interested APEC economies) to test the energy performance of building materials and components and verify their compliance with building code energy requirements.

The US and Thailand are developing a business model for establishing a test centre in Thailand that can service the region and/or be emulated in other economies. The test centre would be used to physically simulate and test windows and other building components for air tightness, etc.

**Session 7 – Updates on recently completed projects**

**Completion of EWG 05 2009 Capacity Development Workshop (China)**

The representative for China (and Vice Chair) reported to the group on the outcomes of the workshop on “Facilitation of International Harmonization of Standards for Energy Management in APEC”.

Over 150 participants attended the workshop in Dezhou, China, including participants from China, Thailand, Japan, US and non-APEC economies such as Ireland, South Africa and the UK.

The workshop set up a network of industrial energy efficiency experts, energy management and standards experts, policy makers and regulators in APEC economics, and provided a platform to share experiences, best practices, and progress with developing “Management System for Energy” (MSE - also known as ‘energy management’) standards in APEC economies. Participants looked for opportunities to harmonise MSE standards, which will allow individual economies to adopt them more quickly and at lower cost, and will prevent barriers to trade.

The workshop was divided into three sections, “The best practice and implementation experience of MSE”, “The Construction, implementation, supervision and assessment mechanism of MSE”, and “Promotion of MSE application on the construction of Low-carbon city” respectively.

Key outputs of this project:

* A database of regional experts has been established to provide technical support on the research, development, implementation, communication and harmonization of MSE standards
* A detailed research report was completed by China National Institute of Standardization (CNIS) which made a detailed international comparison of standards and promotion for MSE. This drew on 12 existing energy management standards from ISO and different region and economies, and also drew on discussion at the workshop

Conclusions from the workshop:

* There is quite similar pathway for all the economies to develop and implement MSE standards, so it is necessary to develop an international MSE standard and guideline for implementation of MSE programmes.
* An information exchange platform is indeed needed based on the feedback from all participants of the workshop.

China’s new project proposal, to host a workshop on energy performance evaluation methodologies, follows on directly from this project.

***ACTION: The representative for China will send a link to a report for the EWG 05 2009 Capacity Development Workshop (China) to the EGEE&C Secretariat to circulate to EGEE&C contacts.***

The meeting was adjourned for the day with agreement to catch up on outstanding agenda items the next day.

**DAY THREE OF THE MEETING**

**Session 1 – Welcome & Introduction, Adoption of agenda**

Participants were welcomed to the meeting and the agenda was adopted.

**Session 2: Recap on previous sessions**

*This session was an opportunity to revisit previous meeting items if required, and to reflect on previous sessions before compiling an Action plan for 2011. The session time was used to finish the agenda items from the previous day’s session on EGEE&C projects.*

**Updates on recently completed projects (continued from Day 2, Session 7)**

**Completion of EWG 022009T Alignment Standby Power Approaches (Australia)**

An APEC International Conference – Alignment of National Standby Power Approaches “Moving Towards 1 Watt and Beyond” – was held in Tokyo, Japan on 19 to 21 October 2010. There were 50 participants at the workshop representing 12 APEC economies and 20 appliance manufacturers and suppliers.

The workshop was also supported by the Asia Pacific Partnership on Clean Development and Climate Change (APP) and IEA 4E Standby Annex.

The goal of the workshop was for industry representatives and government policy makers to share technological and policy approaches used to minimise the use of standby power and identify opportunities to adopt a coordinated approach to this work.

Key outcomes from the workshop:

* Agreement to encourage the widespread adoption of Energy Efficient Ethernet (IEEE 802.3az) in product specifications
* Endorsement of IEC62301 Edition 2 as an accepted measurement method for low power modes
* Promotion of short term (2012) and medium term (2015-18) aspirational standby power limit targets (1 Watt and 0.5 Watts respectively)
* Acknowledgment that energy wasted by network-connected products is a rapidly emerging issue
* Identification of the need for further research and development of new policy initiatives to tackle waste in network-connected products

As a next step, funding and organisational ownership of these projects is required to move forward and get results.

**Updates on ongoing projects (carried forward from Day 2, Session 8)**

**Update on EWG 112009A Cool roofs in APEC economies (US)**

The contract for this project was awarded to Building System & Diagnostics Singapore. The project outputs include:

* a desktop study to assess the current status of cool roofs, including manufacture and supply channels, scientific evidence to support the use of cool roofs, and centres of expertise
* modelling of energy and carbon mitigation potential from cool roof technologies
* policy recommendations – including barriers to address, assessment of existing policies and gap analysis (this is currently in progress)

The US representative explained some of the technical features of a cool roof. High solar reflectance is the most vital property. Features may include a flat or low-sloped surface, the use of white or cool colours, and the use of materials such as metal decking or special paints and coatings. Retrofitting strategies include installing a ‘radiant barrier’ around the edge of the roof to prevent transmission of heat to the rest of the building. A roof’s performance over time (or ‘aged value’) needs to be factored into the calculation of energy and carbon mitigation benefits. Cool roofs are especially beneficial to non-insulated buildings in hot climates.

The project includes a survey to inform the desktop research but so far the response rate has been low.

***ACTION: The US representative will send a link to the Secretariat to circulate to EGEE&C contacts, to encourage them and their contacts to participate in the survey.***

Next steps for project: The project may not be finalised by the due date. The project proponents will check whether an extension is needed to ensure a good quality outcome.

***Discussion***

A representative for Thailand asked about the payback period for cool roofs. The payback period depends on the materials used and labour costs. The US representative referred to an energy calculator developed and used in the US that could be useful to share with other economies.

The representative for Australia asked what existing modelling is available on the impacts of cool roof technologies. The project delivery team are using building energy modelling methodology and Singapore climate data. Studies have been done to assess the impact of cool roofs on urban temperatures – which suggest that the temperature can be decreased by 2-3 degrees centigrade. There is not yet modelling on the energy benefits from operating cooling equipment at a lower temperature as a result of cool roofs. The US and India are collaborating on a study to model global impacts from cool roofing.

**Update on EWG 082010A Street & Outdoor LED Lighting Asia (SOLLIA) (US)**

The US representative explained that a tender has been advertised for this project and only one bid has been received to date. If it is a sufficiently robust tender, the US can apply to the APEC Secretariat to award the contract to the single bidder. The US representative sought volunteers from two other economies to help the US formally evaluate the tender.

***ACTION: Representatives for Australia and Chinese Taipei agreed to evaluate the SOLLIA tender.***

The US representative gave a brief overview of the project. It us a survey of how LED lighting is being used for outdoor applications, such as parking areas. It aims to encourage the uptake of high performance LED lighting, which is still expensive.

***Discussion***:

A representative of Thailand suggested it could be a good for the SOLLIA project to reference the use of LED lighting in warehouses.

The representative for New Zealand (Chair) suggested the study could look at the use of LED for public amenity lighting in remote areas, in conjunction renewable sources of energy such as photovoltaics. He asked whether the study would be limited to Asian economies.

**Update on EWG 102010T LED indoor lighting standards harmonisation (Australia)**

The Australian representative explained that this project involves a 2-3 day conference to produce a consensus on common/harmonised technical, quality, and energy efficiency specifications for indoor LED lighting. Funding to attend the workshop will be available to travel-eligible economies. The outcomes of the workshop will be communicated to relevant international fora.

As this is a new technology entering the market, now is arguably the best time to work on harmonisation – before market saturation occurs, and before there is a proliferation of different standards.

The conference will be held in the second half of 2011. The workshop will be aligned with related activities including the one-day workshop to be held in Chinese Taipei on the promotion and application of LED technologies. ***ACTION: The Australian representative will discuss options with the Chinese Taipei representative to hold the two LED workshops back-to-back.***

***Discussion on the LED standards harmonisation project and CAST***

Meeting participants commented that economy representatives are being asked to report back to their economies on what EGEE&C is doing for CAST.

**Linking the LED project to CAST:** The Chair sought consensus from the group on using linking the LED standards harmonisation project to a Collaborative Assessment of Standards and Testing for LED lighting products (as a pilot for the CAST initiative).

The representatives for Japan expressed support for harmonising LED standards at this early stage of market penetration. They noted that quality testing for this product is important due to its high upfront cost, and in order to promote it effectively. APEC is well placed to lead this work since the four major economies that lead production of LED technology are members of APEC. As a first project under CAST, this could be showcase a model process for creating harmonised standards.

The Chair thanked Japan for its statement of support and outlined next steps to develop a conceptual framework for this a Collaborative Assessment of Standards and Testing for LED lighting, building on .

***ACTION: The Chair will coordinate a draft project scope for a Collaborative Assessment of Standards and Labelling for LED lighting products. This will be circulated to EGEE&C economy representatives (and other key stakeholders) for comment.***

The end of March was agreed as the target timeframe.

**Ideas for collaboration with EGNRET**

*(Brought forward from agenda item 5-3 – Items to report to Joint Meeting with EGNRET)*

Looking ahead to the afternoon’s Joint Meeting with EGNRET, the Chair opened the meeting up to discussion on areas where EGEE&C and EGNRET can collaborate.

The Chairs of the two groups have identified three potential joint projects, all of which support APEC smart grid initiatives:

1. **survey of residential energy loads in APEC economies** (Quantifying load patterns will allow economies to assess the potential of smart technologies (such as smart appliances) to mitigate peak demand)
2. **the impact of electric vehicle rechargers on electricity load** (This could include an assessment of their ability to store renewable energy in a distributed manner in the residential sector; and to supply stored electricity in times of emergency)
3. **demand response protocols in appliances** **– standards development and harmonisation** (to facilitate the ability for key appliances to switch off/ on/ to part load in response to signals from a smart meter or similar device, thereby reducing the electricity load at times of peak demand)

The two Chairs also seek to revive the joint proposal on best practices in renewable energy and energy efficiency in the industrial sector.

Australia expressed support for making its demand response proposal a joint project with EGNRET.

**Minute of decision: Meeting participants broadly supported joint projects to undertake with EGNRET.**

**Session 3 – EGEE&C Action plan for 2011**

The Chair and Secretariat recapped major activities for the group in 2011.

**EGEE&C projects for 2011**:

**In Progress**:

* EWG 102010T Harmonisation of Indoor LED Standards (Australia)
* Self-Funded Workshop for the Promotion and Application of LED Lighting Technology (Chinese Taipei)
* EWG 082010A Street and Outdoor LED Lighting Initiative Asia (SOLLIA)
* EWG 072010A Market compliance mechanisms (US)
* EWG 112009A Cool roofs (US)
* EWG 132009A Energy efficient windows (US)

**Proposed**:

* Demand response capabilities in appliances (Australia)
* Energy Performance Calculation Methodologies (China)
* Self-Funded Workshop on Commercial building envelope (US)

**Joint projects with EGNRET** (key focus on smart grid technologies):

*(pending confirmation at joint meeting)*

* survey of residential energy loads in APEC economies
* the impact of electric vehicle rechargers on electricity load
* demand response protocols in appliances – standards development and harmonisation
* best practices in renewable energy and energy efficiency in the industrial sector

**Instructions from APEC Energy Ministers:**

**Strengthening ESIS:**

* Decide a future direction for ESIS (continue to maintain it as a separate database or host it on the CLASP and ‘superefficient’ websites)
* Continue to expand and update information on standards and labelling activities in APEC economies

**Collaborative Assessment of Standards & Testing (CAST):**

* Undertake close analysis of test standards and conformity assessment procedures used in the APEC region for key appliances
* Identify the key divergences that create trade barriers, and recommend steps to overcome them
* Focus on LED lighting standards in Year One

**Commercial buildings**

*(Pending support from EGEE&C 38 economy representatives and other decision-makers)*

* Develop a five-year roadmap for EGEE&C to support commercial building energy efficiency (see discussion below)

**ACTION: The Chair will present the EGEE&C Action Plan for 2011 to the EWG meeting in Vancouver, May 2011**

***Discussion on incorporating buildings related work into the EGEE&C Action Plan***

The US representative noted that EGEE&C has been devoting extensive time to appliance and equipment efficiency but could devote more time to energy efficiency in buildings (envelope, construction, materials). There is much bilateral work taking place in this area and the recent CEEDS II workshops on building codes identified numerous areas for collaboration. In particular, numerous economies are seeking to adopt codes but need expertise to introduce them or have barriers to address in their authorising environment. High-density developed economies have much expertise to share in this area.

The US representative suggested that the EGEE&C could develop a 5-year roadmap for EGEE&C engagement in the buildings sector, to present to SOM 3.

**ACTION: EGEE&C members to confirm whether they support the proposed development of a 5-year roadmap for EGEE&C engagement in the buildings sector (Chair & Secretariat to coordinate).**

**ACTION: The Secretariat will obtain and distribute the proceedings from CEEDS II, to highlight potential building energy efficiency workstreams for EGEE&C.**

The representative for Chile noted that bigger focus on buildings would be likely to stimulate more participation from APEC economies that are not appliance manufacturers (such as Chile).

A representative for Japan noted that EGEE&C economy representatives not active in the buildings sector need to discuss the suggested 5-year ‘buildings’ roadmap with their responsible officials before committing.

A representative for Thailand noted the importance of good, user friendly building performance simulation programmes for encouraging the adoption of green building codes and practices. If simulation programmes are too complex, designers do not like to use them.

**Session 5 – Housekeeping/other**

**5-1 – Upcoming Events:**

**“Greening Your Small Business”, SOM II, Big Sky Montana, May 2011**

A representative of the US Dept of Commerce addressed the meeting about this event. The event will take place on Sunday 15 May in Big Sky Montana. The event organisers invited EGEE&C representatives to this event, asked them to recommend speakers for this event (in particular successful SMEs and experts in the field), and asked them to promote this event through their networks.

Three categories will be covered at the event:

* A functional approach to issues in green business – financing, regulatory environment, networking and trade promotion
* Geographical areas – speakers from different economies
* Sectoral areas – green buildings and energy efficiency, renewable energy, and traditional environmental products and services

This is a one day event, with a reception planned in the evening. There will be opportunities to network with around 30-40 US companies.

**ICA Senior Officials Meeting – April 2011, Hanoi, Vietnam**

The Chair will attend this meeting to present on the benefits of cooperation between APEC and ICA.

**Singapore International Energy Week (SIEW) 2011 – 31 Oct – 4 Nov 2011, Singapore**

The 4th SIEW will take place from 31 Oct – 4 Nov 2011.

***ACTION: The representative for Singapore will provide a flyer/link to the EGEE&C Secretariat to circulate to EGEE&C contacts.***

**38th Meeting of the APEC Expert Group on Energy Efficiency and Conservation**

The representative for Korea extended an invitation to the group to participate in this meeting and associated workshops over three days from 7-9 November 2011, in Seoul, Korea.

The hosts at the Korea Energy Management Corporation (KEMCO) seek expressions of interest in hosting a meeting or workshop alongside EGEE&C 38. The ICA representative has already discussed with her a tentative workshop on distribution transformers.

**THE CHAIR THANKED THE HOST AND PARTICIPANTS AND BROUGHT THE MEETING TO A CLOSE.**