1. The 44th meeting of EGEE&C was held in Beijing, China, 20-21 October 2014. The meeting was held alongside a number of APEC project workshops and meetings including:
   - Workshop: Net Zero Energy Building and Community (EWG 03-2013A)
   - Workshop: Catalysing Monitoring, Verification and Enforcement Best Practices Exchange and Building Compliance Capacity in the APEC Region (EWG 12-2013A)
   - A site visit to the National Testing and Inspection Centre for Radio and TV products of China.

2. Representatives from nine economies attended the meeting, including; Brunei, Canada, China, Japan, New Zealand, Philippines, Chinese Taipei, Thailand and USA. Participants also included representatives from: APERC, the Transportation Working Group, the International Copper Association (ICA, also known as the Copper Alliance)1, and the US-based Collaborative Labelling and Appliance Standards Program (CLASP)2.

3. The meeting was opened with welcoming addresses from Ms, Huimin Pan, Vice Director General of China’s National Energy Agency (NEA), Ms. Aixian Li, Vice President of the China National Institute of Standardization (CNIS), and Mr. Qingqin Wang, Vice President of the China Academy of Building Research (CABR). The welcoming remarks emphasised China’s strong commitment to, and investment in, low carbon development during a sustained period of economic growth.

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1 The ICA is partnering with EGEE&C (as well as EGNRET) on a number of projects relating to common interests.
2 CLASP administers the APEC Energy Standards Information System (ESIS) and the APEC Collaborative Assessment of Standards and Testing (CAST) initiative.
Focus on Transport

Summary and Recommendations

4. The 44th EGEE&C Meeting, included a session focussed on transport energy efficiency, in which Canada’s Transportation Working Group representative participated on behalf of the Transportation Working Group (TPTWG) and its Lead Shepherd. Two Asia Pacific Energy Research Centre (APERC) representatives also took part.

5. The EGEE&C Chair and the TPTWG representative began by discussing the Energy and Transport Ministerial of 2011, in which APEC Energy and Transport Ministers instructed EWG and TPTWG to work together more closely on initiatives to promote energy efficiency in the transportation sector. They briefly outlined the areas in which their respective fora have been working to promote energy efficiency, and highlighted the key activities that have recently been undertaken in these areas.

6. A presentation followed on APERC’s transportation sector energy modelling and projections. This was seen as a useful tool to inform policy-making among APEC economies. The modelling conducted in 2014 will be shared among EGEE&C members and key stakeholders and they will be invited to provide supplementary data and feedback on the metrics where they see opportunities to further enhance the tool.

7. EGEE&C economy representatives then provided an overview of transport-related energy efficiency policies and programmes in their economies, after which the TPTWG representative gave a presentation on a recently-completed APEC-Funded Project to develop a carbon footprint calculator developed for marine freight vessels and their cargo.

8. The topic presentations concluded with a discussion highlighting common interests and possible opportunities for further collaboration between the TPTWG and the EGEE&C (as one of the sub-fora of the EWG). The discussion also highlighted some potential opportunities to draw on the work of APERC, and to cooperate with APERC, in order to further promote region-wide improvements in transport-sector energy efficiency.

9. It was agreed that, as a first step towards potential collaboration in the future, the TPTWG representative would report to the TPTWG Lead Shepherd, and the EGEE&C Chair would report to the EWG Lead Shepherd, on the outcomes arising from this session and make recommendations on the opportunities identified for further collaboration.

Opportunities for TPTWG/EGEE&C Collaboration on Transportation Energy Efficiency

10. Transport energy efficiency is a cross-cutting issue that falls under the responsibilities of different APEC fora and also different interest groups and public sector agencies within the various APEC economies.

11. Transport is a major contributor to overall energy demand among APEC economies (the largest or second-largest contributor among most economies) and significant growth in
transport-related energy demand is forecast to occur due to rapid urbanisation, increased population and greater prosperity.

12. Energy efficiency in the transportation sector can therefore play a large part in meeting APEC’s aspirational goal to reduce energy intensity by 45% (against 2005 levels) by 2035, and consequently in reducing carbon dioxide emissions and reliance on fossil fuels within the region.

13. APEC Energy and Transport Ministers have instructed their respective APEC officials to work together to promote increased uptake of energy efficiency in the transportation sector.

14. The EGEE&C believes that the policy tools that have been successfully used by APEC economies to promote energy efficient products and buildings can also be applied successfully to products (such as tyres and vehicles) and fuels that are used in the transport sector, including, for example:

- Standards and labelling programmes
- Development of common energy performance test metrics
- Consumer information programmes
- Monitoring, verification and enforcement regimes
- Program evaluation frameworks.

15. The EGEE&C has expertise in these areas and access to a network of experienced practitioners in APEC economies: it could be useful for the Expert Group to share this knowledge with the TPTWG.

16. The EGEE&C sees value in sharing APERC’s transportation modelling tool with its members to raise their awareness of issues and opportunities and thus help inform the decisions of policy makers. There may also be value in inviting members to give feedback on the metrics, data and assumptions used where they see opportunities to improve the tool. It is also anticipated that this tool may be of value to the TPTWG and that it could be useful for the TPTWG to invite APERC to an upcoming TPTWG meeting to present on its transportation modelling work.

17. APERC’s planned Energy Efficiency Policy Workshops may also provide an opportunity to focus on areas of policy development common to both transportation and product energy efficiency.

18. As a first step in promoting further collaboration, EGEE&C invites the TPTWG and EWG Lead Shepherds to further discuss these opportunities for collaboration and invites the EWG Lead Shepherd to provide some feedback and guidance to the EGEE&C Chair. The two Lead Shepherds may also wish to involve APERC’s Director in their discussion.

**Work Programme and Updates**

**Strategic Overview:**

19. The group received an update and overview of the Energy Working Group Strategic Plan and a reminder to the group that energy efficiency is still the first fuel and has been a major contributor to reduced reliance on fossil fuels. We noted the limited amount of
APEC funding for projects and that the funding process had become highly competitive with only the strongest proposals being funded.

20. The US representative and coordinator of the ESCI and APEC Smart Grids Initiative (ASGI) initiatives provided an overview of ESCI and AGSI - the full details can be found in a power point presentation, which is available on the APEC EGEE&C website. The presentation highlighted current and recent APEC-funded projects contributing to the ESCI. These include a number of EWG projects, many of which are being undertaken at the EGEE&C level. The presenter particularly noted the high number of projects under the LCMT initiative, and that there have been relatively few projects occurring under the ‘Smart jobs’ pillar.

21. The US representative noted that it has been challenging to keep track of all the activity across these various projects and their key outcomes. He strongly encouraged all Project Overseers to produce two-page summaries at the conclusion of their projects in order to communicate the key outcomes to senior-level APEC officials.

22. EGEE&C representatives were also strongly encouraged to link their APEC funding proposals clearly to the ESCI and ASGI initiatives (wherever possible). This will help them to gain high-level support from senior APEC decision-makers.

**APERC Activities:**

23. The Asia Pacific Energy Research Centre (APERC) provided an overview of their update their cooperative activities that include Peer Review on Energy Efficiency (PREE) and the Cooperative Energy Efficiency Design for Sustainability (CEEDS).

24. Ten economies have undertaken the PREE to date. Five of the remaining APEC economies are eligible for IEA peer reviews along similar lines to the PREE, hence are not prioritised. APERC would like to prioritise six economies - China, Hong Kong, Mexico, Papua New Guinea, Russia, and Singapore - for upcoming PREE reviews.

25. APERC also outlined plans to replace the twice-annual CEEDS workshops with an annual Energy Efficiency Policy (EEP) workshop. Like CEEDS, the EEP workshops will focus on a specific policy issue with the aim of building capacity in developing APEC economies. Plans are under discussion to hold the first workshop in Singapore in the first half of 2015 to coincide with the 45th EGEE&C meeting. Possible themes were presented to EGEE&C for comment.

26. The APEC Operational Fund under which APERC previously applied for PREE and CEEDS funding is now oversubscribed. APERC is therefore seeking future funding through the APEC Support Fund. If this occurs, future PREE reviews will need to focus on developing economies, while EEP Workshops will continue to focus on capacity building (as did the CEEDS workshops). Given APEC funding constraints, APERC is also seeking expressions of interest from developed economies to co-fund or contribute in-kind to the EEP initiative.

**ESIS and CAST:**

27. Meeting participants received an update from the APEC Energy Standards Information System (ESIS) from CLASP (CLASP manages the ESIS database on behalf of the EGEE&C). ESIS is a detailed database of standards and labelling (S&L) for appliances,
equipment and lighting that apply within the APEC region. It also identifies responsible agencies within each economy and provides links to the relevant regulations and standards. It is a subset of CLASP’s global S&L database and is funded through the US-led SEAD\(^3\) initiative (which operates under the Clean Energy Ministerial). A review of all the economy content and key economy contacts has been carried out in 2014.

28. The CLASP representative also informed the group that a SEAD Policy Exchange Forum has been established to enable representatives from both SEAD and non-SEAD\(^4\) governments to share best practices on specific equipment and appliance energy efficiency topics, including on both cross-cutting and product-specific issues.

29. The meeting received an update from the ‘Collaborative Assessment of Standards and Testing’ (CAST) initiative. This was an initiative of the APEC Energy Ministers who instructed the Expert Group to implement it in order to advance the development and alignment of standards and procedures used to test the energy performance of key energy-using products in APEC economies. To date heat pump water heaters and electric motor repair projects have been completed and a television project is in progress.

30. The CAST television project was the subject of a separate presentation. This project assessed the current status of television standards in the APEC region, including the degree of harmonisation, and found that:

- In most instances the international test standard has been adopted with modifications
- Test standards need to apply more rigour and consistency to measuring auto brightness controls (ABC) which can potentially reduce a TV’s energy consumption by 20%
- Standards need to evolve to address new technologies (such as smart controls), an increasing range of viewing platforms for television content, and trends in viewer behaviour (e.g. the type of programming being viewed)
- Around 70 separate performance levels were identified across the standards assessed. Recommendations were made on distributing rating bands more evenly and ensuring that the highest levels are not too stringent and the lowest are not too lenient.

**Project Updates**

**EWG-03-2013A – Nearly (Net) Zero Energy Building (China)**

31. The project is being managed by the China Academy of Building Research (CABC) which first became involved in APEC building energy efficiency activities through taking part in a recent SCSC green building workshop. Funding for the project was approved in 2013 and it is due for completion at the end of 2014.

32. The first workshop for this project took place over two days in Beijing, October 2013 and involved 52 delegates from twelve APEC economies. The second workshop was held on 22-23 October 2014, after the EGEE&C 44 meeting.

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\(^3\) Super-Efficient Appliance Deployment
\(^4\) E.g. IEA-4E, APEC, and ‘SEAD technical assistance eligible’ economies
33. The project identifies 20 Net Zero Energy Building (NZEB) pilot projects occurring in Canada, China, Japan, Korea, and the US and shares their methodology and findings to date. It also looks at the definitions, policies, and roadmaps for NZEB that different economies have adopted (including Korea’s policy to introduce mandatory NZEBs from 2020), and alliances and networks that have been established to promote NZEB practices. The workshop featured presentations from speakers involved in the key pilot projects. It took place in the China Academy of Building Research’s Nearly Zero Energy Building and included a tour of the building.

34. Prior to being finalised and submitted to the APEC Secretariat, the final project report will be circulated to EWG and EGEE&C members, to give them the opportunity to comment.

35. A concept note has been developed for APEC funding in 2015 on a follow-up project which will include a comparative study of 10 key NZEB pilot projects, a best practice guidebook and workshops.


36. The overall project objective is to facilitate the adoption of the new IEC refrigerator test method among APEC economies. The project includes a desktop analysis and laboratory testing to compare existing economy standards against the IEC standard and identify pathways to transition to the IEC standard, and workshops to enlist participation and share findings. An RFP for this project was released in October and four submissions were received. Following the evaluation process a preferred candidate has been determined.

37. A workshop was held on the afternoon of the 21st October directly after the EGEE&C meeting, and provided an overview of the project; the current status of refrigeration standards in APEC economies (including for Australia/New Zealand, China, Japan, Malaysia, Singapore, Thailand, Philippines, and Vietnam); and the new IEC test method under development.

38. The new IEC standard seeks to improve on the existing IEC standard by providing a closer simulation of real use conditions in the test environment, closing loopholes in the existing test, and overcoming existing barriers to harmonisation of test requirements. A presentation from Japan highlighted a proposed simplified test method (based closely on the new IEC method) for adoption by ASEAN economies and other tropical economies.

39. The project overseers are seeking representatives to participate in a technical reference group for the project. Several of the workshop participants volunteered to participate and further expressions of interest can be directed to the project overseers.

CTI 27-2013 Aligning Energy Efficiency Regulations for ICT Products - Implementing a Strategic Approach (US)

40. On October 24th, 2014, a meeting to advance the APEC project “Aligning Energy Efficiency Regulations for ICT Products” was held in Beijing. The meeting was supported

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5 Association of South East Asian Nations
by the Standing Committee on Standards and Conformance (SCSC) ICT EE Alignment Working Group. The purpose of the meeting was to follow up on recommendations made at the August meeting to develop agreed actions on a pilot project making personal computers (PC) testing data, based on IEC 62623 standard, transportable among APEC economies. Attendees included representatives from government agencies, testing laboratories and PC industry companies from China, US, New Zealand, Chinese Taipei, Japan.

41. After the discussion, the following recommendations were brought forward:

- Considering the tight timeline, attendees recommended a half-year extension to the original plan;
- If the extension is not available, multi-year efforts to continue the project could be considered. A three-step implementation plan based on the original plan was proposed at the end of the meeting. The first step could be finished by the end of this year and another 2 steps could be conducted in the following years if the project received support from APEC.

42. Step 1: comments on IEC 62623 test result form (TRF) should be collected from the economy representatives in SCSC. Once the TRF was finalised, pilot testing for verifying the TRF could be implemented in volunteer economies, especially those economies that have no experiences of the IEC 62623 standard. China agreed to join the future pilot testing.

43. Step 2: A workshop could be organized to discuss policy and technical barriers for adopting the IEC 62623 TRF and seek the endorsement of policy makers for accepting transportable testing results based on IEC 62623

44. Step 3: Training and round robin testing would be carried out to assess the testing capacity in APEC region and improve the reliability of the test results. This step could be implemented in parallel with the second step.

45. At the end of meeting, attendees agreed project overseers should coordinate the recommended activities.

EWG 12-2013A Catalysing Monitoring, Verification and Enforcement Best Practices Exchange and Building Compliance Capacity in the APEC Region (Australia)

46. On October 24th, 2014 an APEC Best Practice Compliance Workshop was held to share outcomes and recommendations arising from EWG 12-2013A and to seek buy-in from APEC economies to cooperate more closely on compliance activities.

47. Representatives from Thailand and New Zealand (on behalf of Australia and New Zealand) gave presentations on key learnings from their respective standards and labelling compliance programmes.

48. Workshop participants were introduced to an inventory of test laboratories and their capabilities in the APEC region that has been produced under this project, together with a set of recommendations on how economies can share information and resources to improve compliance outcomes and reduce costs.
49. The workshop culminated in the drafting of an action plan for APEC economies to adopt in order to take these recommendations forward. This is modelled somewhat on a similar multi-lateral agreement that has been successfully adopted under the LITES Asia initiative. The project overseers are also establishing a network of practitioners to share information and resources to improve compliance outcomes in the region.

CTI 13A 2014 – Harmonizing Standards and Enhancing Technical Capacity in Measurement and Verification (M&V) of Energy Savings of Projects or Organization (China)

50. The objective of this project is to share experiences in applying the harmonised M&V methodologies promulgated in the ISO Energy Management Standard; improve capacity to apply the standards in developing economies, and enhance the understanding among policy makers and ESCO’s on the importance of applying these standards.

51. Key outputs include an APEC economy review of current methodologies, standards and certification, who the key stakeholders are, and the existing capacity in the region to carry out M&V in accordance with the standards; a workshop; and a set of actionable recommendations.

52. Currently work includes preparing the questionnaire that will be used to inform the review and preparing for the workshop. The Project Overseers are seeking assistance from the SCSC & EGEE&C to promote participation in the project, and to identify opportunities to hold the workshop alongside an upcoming SCSC or EGEE&C meeting. (An alternative could be to hold the workshop alongside a meeting of the relevant ISO standards committee.)

EWG 05 2014A – Review of the Design and Effectiveness of Vehicle Fuel Efficiency Labelling and Consumer Information Schemes (New Zealand)

53. The project’s aim is to review the effectiveness of existing light vehicle fuel economy labelling (VFEL) schemes. The project will produce a comparative study and best practice guide to identify lessons learnt and best practices from these schemes for those economies (especially developing economies) that wish to implement (or improve) a VFEL programme.

54. A tender was issued in September in order to select a suitable contractor to carry out the analytical work. The Request for Proposals closed on 13 October. A three-person panel from three different APEC economies assessed the proposals, selected a preferred contractor, and provided a recommendation to the APEC Project Director. Contract negotiations are under way. The contractor is scheduled to commence the analytical work on 17 November.
New projects and proposals

EWG 05 2014S APEC Forum - Promoting Energy Efficiency and Low Emissions at Coal-Fired Power Plants (China)

55. This proposed Self-funded forum led by China is scheduled for 4th December 2014 in Beijing. It will provide a platform for the stakeholders in APEC economies (such as Australia, Chinese Taipei, US, New Zealand) to share information on emerging technologies to improve the energy efficiency and lower the particulate emissions of coal-fired power plants. It will draw upon research and development projects undertaken by Guodian New Energy Technology Research Institute to initiate in-depth discussions regarding the emerging technologies for energy efficiency and low emissions.

US proposal on lighting design (follow-up to EWG 142012A)

56. This project seeks to hold two sequential workshops bringing academic experts and policy makers together to address development of best practices and unified educational programs across APEC economies.

57. It builds on a previous project which looked at promoting best practices lighting design through establishing lighting design centres (and which included a workshop held in Bangkok last year). That project highlighted opportunities for fruitful collaboration between architectural faculties in universities and energy departments in government through the establishment of lighting design centres to train students in best practices of lighting and luminaire design.

58. The US representative welcomed offers of co-sponsorship from other APEC economies and noted that lighting merits interventions to reduce energy intensity as it accounts for 25% of global energy use and up to a third in some developing economies.

Other proposals - as discussed above

59. Other proposals discussed included a proposal for follow-up project to EWG-03-2013A-NEARLY (NET) ZERO ENERGY BUILDING, which is discussed under the relevant project update above, and an APEC Self-Funded proposal on a capacity building workshop on Energy Efficiency Policy – also discussed above (under “APERC activities”).

Next Meeting

60. The next EGEF&C meeting will be held around March – April 2015 in Singapore. The second meeting in 2015 will be hosted by the Philippines.

61. The next meeting will likely be aligned with one or two side events. Events currently signalled include:

- APERC’s first Energy Efficiency Policy Workshop (special topic to be identified – options have been shared with EGEE&C for feedback)
- EWG 05 2014A – Review of the Design and Effectiveness of Vehicle Fuel Efficiency Labelling and Consumer Information Schemes (New Zealand)
- CTI 13A 2014 – Harmonizing Standards and Enhancing Technical Capacity in Measurement and Verification (M&V) of Energy Savings of Projects or Organization (China)