

## **The 55<sup>th</sup> Meeting of APEC Expert Group on Energy Efficiency & Conservation (EGEEC 55)**

### **Meeting Summary**

17 – 20 November 2020

Virtual Meeting hosted by Hong Kong, China

#### **1. Introduction**

The Joint Meeting of 55<sup>th</sup> Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEEC 55) and 31<sup>st</sup> APEC Expert Group on Energy Data and Analysis (EGEDA 31) and associated Workshops was hosted by Hong Kong, China on 17 – 20 November 2020.

The Joint meeting of EGEEC 55 and EGEDA 31 was held during 9:00am – 11:00am on 19 November 2020 and 12:00pm – 12:30pm on 20 November 2020. The EGEEC 55 meeting was held during 11:00am – 12:30pm on 19 November 2020 and 9:00am – 12:00pm on 20 November 2020. Two workshops were held alongside the Joint Meeting, namely (1) The APEC Workshop on District Cooling and/or Heating Systems by Hong Kong China held on 17 November 2020; and (2) The Energy Efficiency Policy Workshop: Economic Recovery through Energy Efficiency by APERC held on 18 November 2020.

Delegates from ten (10) APEC member economies, namely Australia; China; Hong Kong, China; Indonesia; Japan; Malaysia; New Zealand; Chinese Taipei; Thailand; and the United States attended the meeting. Representatives from four (4) APEC sub-fora including Expert Group on Energy Data and Analysis (EGEDA); Expert Group on New and Renewable Energy Technologies (EGNRET); Asia Pacific Energy Research Centre (APERC); and APEC Sustainable Energy Center (APSEC) also participated in the meeting. Representatives from two (2) international organisations, namely the International Energy Agency (IEA) and the International Copper Association (ICA) attended the meeting as observers.

The list of EGEEC 55 participants was attached in Appendix A of this meeting summary.

## **2. Joint Meeting of EGEEC 55 and EGEDA 31 (19 November 2020 09:00am – 11:00am)**

The Joint meeting was co-chaired by Mr. Vy Ek-chin, Chair of EGEEC, Mr. Hou Jen-yi, Vice-chair of EGEDA, and Mr. Chu Kei-ming, Barry, Assistant Director / Electricity and Energy Efficiency of the Electrical and Mechanical Services Department (EMSD), the Government of the Hong Kong Special Administrative Region (HKSAR).

### **2.1 Official Welcome**

The Joint Meeting was officially welcomed by Mr Wong Kam-sing, Secretary for the Environment, the Government of the HKSAR. The Official Welcome highlighted the plans and programs of Hong Kong, China on progress towards low carbon future and green energy development.

### **2.2 Opening Remarks and Adoption of Agenda**

The opening remarks from Mr. Hou Jen-yi, Vice-chair of EGEDA, and Mr. Vy Ek-chin, Chair of EGEEC, emphasized the need for collaborative works and the importance of data sharing in achieving the APEC goals, and also encouraged members' active participation and cooperation in those works. The sharing of energy data analysis, energy efficiency policies, and stimulus programs would be beneficial to APEC member economies in formulating energy efficiency improvement to mitigate the impact of COVID-19 and meeting the APEC energy intensity reduction goal. They welcomed delegates from APEC member economies to attend the joint meeting, and thanked Hong Kong, China for the hospitality in hosting the meetings and associated workshops.

The joint meeting agenda was adopted by attending member economies.

### **2.3 Updates from APEC / EWG / EGEEG / EGEDA / APERC / APSEC**

Seven (7) presentations were conducted as follows:

#### **2.3.1 “APEC Secretariat Update” by Mr. Tetsuya Shimokawa, Program Director, APEC Secretariat**

APEC secretariat presented the overall outcomes of 2020 project sessions. In 2020 project session 1, the approval rate of APEC funded project was 56% and 4 EWG

projects were approved by BMC. In 2020 project session 2, the approval rate of APEC funded project was 66% with 11 EWG projects granted in principle approval and were under the QA process.

The APEC project cycle for project session 1, 2021 was introduced with the key considerations in arranging APEC virtual events, for example time zones; event duration; platform and pre-event test runs; etc. An updated Tool Kit was also introduced and uploaded onto APEC website for the meeting organizers' reference.

### **2.3.2 “EWG Secretariat Update” by Ms. Lynn Wang, EWG Secretariat**

EWG secretariat presented the recent EWG decision on Project Management. Expert Group Chairs were requested to ask members to present in EWG meeting a 2 page summary of each EWG project completed since last EWG meeting. 2020 EWG Workplan, APEC Energy Security Initiative and also key conclusion of EWG 59 were also presented by EWG secretariat. APERC, EGEDA, EGEEC and EGNRET were encouraged to work together to further analyse and provide any new suggestions on the two APEC goals.

### **2.3.3 “EGEEC Update” by Ms. Jovian Cheung, EGEEC Secretariat**

EGEEC secretariat presented the meeting summary of the 54<sup>th</sup> meeting of APEC EGEEC held on 23-25 September 2019 in Cebu, the Philippines, followed by EGEEC project status. EGEEC secretariat highlighted possible collaboration with EGEDA on data collection, i.e. EE indicator templates; DCS data collection, etc. The initial collaboration was carried out through conducting the APEC DCHS Workshop. EGEEC secretariat further reminded members that during EWG 59, the Lead Shepherd tasked EGEEC to discuss energy efficiency improvement as policy solutions.

### **2.3.4 “EGEDA Update” by Mr. Edito Barcelona, EGEDA Secretariat**

EGEDA secretariat reported updates on its activities such as energy data collection, processing and maintenance of database and website, conduction of trainings, meetings and workshops and international collaborations on energy statistics. The tracking on the APEC energy intensity reduction goal and APEC renewable energy doubling goal using 2018 data were also presented.

### **2.3.5 Overview of APEC Energy Situation” by Ms. Elvira Torres Gelindon, Research Fellow, APERC / ESTO**

APERC presented the overview of APEC energy situation including the economic indicator, the total primary energy supply and relative shares and the total final energy consumption. APERC also shared the energy indicators template submission status and the decomposition of final energy consumption in 2005 – 2018.

### **2.3.6 “APERC Update” by Mr. David Wogan, Assistant Vice President, APERC**

APERC presented its current research works on the APEC Energy Outlook 8th Edition scenarios, i.e. (i) current policies scenario; (ii) announced policies scenario; and (iii) climate change scenario. APERC mentioned that the Outlook 8th Edition would use EGEDA/APEC data for the first time. APERC also pointed out that they were requested to present the effect of COVID-19 on GDP as well as energy demand and supply in APEC region, and would try to present the preliminary result of Outlook 8<sup>th</sup> Edition in EWG60 meeting.

### **2.3.7 “APSEC Update” by Mr. Steivan Defilla, President Assistant, APSEC**

APSEC presented its research works on (i) Forms of Low-carbon Energy systems; and (ii) Role of Urban Planning for Addressing Climate Change and Disasters. APSEC also presented its project works on “Solar Powered Emergency Shelter Solutions Phase II” and the summary on “6<sup>th</sup> Asia-Pacific Energy Sustainable Development Forum and 5<sup>th</sup> Workshop on Sustainable Cities”.

### 3. EGEEC 55 Meeting (19 November 2020 11:00am – 12:30am; 20 November 2020 09:00am – 12:00am)

The EGEEC 55 meeting was co-chaired by Mr. Vy Ek-chin, Chair of EGEEC and Mr. Chu Kei-ming, Barry, Assistant Director / Electricity and Energy Efficiency of EMSD, the Government of the HKSAR.

#### 3.1 Adoption of Agenda

The EGEEC 55 meeting agenda was adopted by attending member economies.

#### 3.2 Project Updates Presentation

The status of fifteen (15) nos. of APEC project were presented and a summary of the project status was provided below.

APEC Project Title		Proposing Economy	Project No.	Status
1	APEC Best Practice Guidelines for Establishing and Enhancing Energy Efficiency Incentive (EEI) Schemes	Australia	EWG 09 2018A	On-going
2	APEC Funded Project on Energy Intensity Reduction in the APEC Region's Urbanised Cities	Hong Kong, China	EWG 08 2019A	On-going
3	APEC Self-funded Project on APEC Workshop on District Cooling and/or Heating Systems (DCHS)	Hong Kong, China	EWG 08 2019S	On-going
4	APEC Funded Project on Capacity Building Workshop on Retro-commissioning (RCx)	Hong Kong, China	EWG 09 2020A	QA process
5	APEC Peer Review on Energy Efficiency (PREE) Phase 8	Japan / APERC	EWG 02 2018A	Completed
6	APEC Peer Review on Energy Efficiency (PREE) Phase 9	Japan / APERC	EWG 08 2018A	On-going
7	APEC Peer Review on Energy Efficiency (PREE) Phase 10	Japan / APERC	EWG 07 2019A	On-going

APEC Project Title		Proposing Economy	Project No.	Status
8	Exploring Co-Benefit Opportunities for Renewable and Energy Efficiency Projects in the APEC Region	Thailand	EWG 04 2019A	On-going
9	Accommodating Disruptive Technology into RE&EE Policy for Energy Security	Thailand	EWG 11 2019A	On-going
10	Integrating Electrical Vehicles and Solar Rooftop PV in Electricity Distribution Systems with Continued Performance of Distribution Transformers	Thailand	EWG 03 2020A	BMC approved
11	APEC Workshop on Integrated Energy-Water Planning and Policy Formulation	The US	EWG 13 2018A	Completed
12	Coordinating Standards for Cool Roof Testing and Performance	The US	EWG 14 2018A	Completed
13	APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy	The US	EWG 06 2019A	On-going
14	Sustainable Mobility: Routes for integrating the Energy and Transport Sectors for Urban Cities	The US	EWG 05 2019A	On-going
15	Evaluation of Energy Technologies, Programs and Policies	The US	EWG 12 2019A	On-going

### 3.2.1 **APEC Best Practice Guidelines for Establishing and Enhancing Energy Efficiency Incentive (EEI) Schemes (EWG 09 2018A / Australia) - Status: On-going**

The objective of this project was to identify and document best practice guides for the design and review of energy efficiency incentive schemes. This project would develop two guidelines with supporting case studies for (i) establishing a new energy efficiency incentive scheme; and (ii) enhancing an existing energy efficiency incentive scheme. The project overseer invited members to participate in a survey to ensure that the guidelines would meet members' needs and a limited number of structured interviews with policymakers would also be carried out. On completion of the guidelines, two interactive workshops would be held in 2021 to present the guidelines.



### **3.2.2 APEC Funded Project on Energy Intensity Reduction in the APEC Region's Urbanised Cities (EWG 08 2019A / Hong Kong, China) - Status: On-going**

The objectives of this project were (i) to analyse the energy intensity reduction performance in developed APEC member economies' urbanised cities; (ii) to identify key drivers for accelerating aggregated energy intensity reduction for new and existing buildings, in addition to regulations; and (iii) to develop a guidance for policy makers, particularly developing economies, to urbanise their city and to lower their energy intensity. A study report to address urbanisation concerns and energy efficiency technology development challenges as well as to share the best energy efficiency policies and practices, and the emerging new technologies would be published and an online workshop would be held in March 2021 tentatively.

### **3.2.3 APEC Self-funded Project on APEC Workshop on District Cooling and/or Heating Systems (DCHS) (EWG 08 2019S / Hong Kong, China) – Status: On-going**

The objectives of this project were to encourage the deployment of DCHS to reduce energy consumption and peak load cooling demand and to share the experience and best practices with the workshop participants from various economies. A virtual workshop was successfully held on 17 November 2020 alongside EGEDA 31 and EGEEEC 55 with over 110 participants from 15 APEC member economies and 16 organisations. Workshop summary would be submitted to APEC Secretariat in January 2021.

### **3.2.4 APEC Funded Project on Capacity Building Workshop on Retro-commissioning (RCx) (EWG 09 2020A / Hong Kong, China) - Status: QA Process**

The objectives of this project were (i) to share the experience and best knowledge-based practices of RCx in achieving APEC aspirational target of reducing aggregate energy intensity by 45 percent from 2005 levels by 2035 and Statement on COVID-19 by APEC Ministers Responsible for Trade; and (ii) to build capacity by collaborating with policy-makers, experts, academia, international organisations, practitioners and related stakeholders in developing RCx implementation frameworks, guidelines, and training programmes in pursuing facilitative measures

that will expedite economic rebound. A capacity building workshop cum training would be organised in 2021 to share RCx guidelines and experiences.

### **3.2.5 APEC Peer Review on Energy Efficiency (PREE) Phase 8 (EWG 02 2018A/Japan) – Status: Completed**

APEC Peer Review on Energy Efficiency (PREE) Phase 8 had two parts. The first part of PREE Phase 8 was a peer review, which provided recommendations for the host economy on how implementation of their energy efficiency action plans could be improved with a view to achieving their energy efficiency goals. The second part of PREE Phase 8 was an Energy Efficiency Policy (EEP) Workshop, which succeeded the Cooperative Energy Efficiency Design for Sustainability (CEEDS) project as a forum to further discuss key issues in the previous PREEs. The peer review was cancelled due to the restructuring in the Russian Government. An EEP workshop was successfully held in Hong Kong, China in March 2019.

### **3.2.6 APEC Peer Review on Energy Efficiency (PREE) Phase 9 (EWG 08 2018A/Japan) – Status: On-going**

APEC Peer Review on Energy Efficiency (PREE) responded to the declaration at the 9th APEC Energy Ministers Meeting (EMM9) in Fukui, Japan to promote the energy efficiency of the APEC member economies and meet the APEC's aggregate energy intensity reduction goal of 45% by 2035. A peer review would be conducted to provide recommendations for the host economy on how implementation of their energy efficiency action plans could be improved with a view to achieving their energy efficiency goals. In PREE Phase 9, a follow-up PREE, which was designed to assist a former PREE host economy in implementing the recommendations of the PREE review team was held in Peru in March 2019. Completed report was submitted to BMC.

### **3.2.7 APEC Peer Review on Energy Efficiency (PREE) Phase 10 (EWG 07 2019A/Japan) – Status: On-going**

The PREE Phase 10 was a follow-up from last PREE Indonesia in 2011. It was scheduled to be held in 2020. Due to COVID-19 and at the request of Indonesian Government, it had been delayed until October 2021. This peer review would be an opportunity to do a stock-take on the progress made over the past decade. Preparation works would begin in early 2021.



### **3.2.8 Exploring Co-Benefit Opportunities for Renewable and Energy Efficiency Projects in the APEC Region (EWG 04 2019A/Thailand) – Status: On-going**

The objectives of this project were:

- i. To share best practices of successful joint projects for RE&EE implementation with co-benefit in power generation and distribution, transport, and buildings sector.
- ii. To develop guideline with criteria and framework for joint RE&EE projects with co-benefit technically and economically.
- iii. To share example of cost benefit analysis (CBA) on successful projects , such as RE&EE in transport sector - EV & biofuel.
- iv. To build capacity and network for co-benefitting project developers in designing, planning and assessing potential RE&EE joint projects.

Project scope included:

- i. 2-day workshop in March 2021 in hybrid mode
- ii. 2-day workshop in June 2021 in hybrid mode.

Outcome of this project included:

- i. Guideline for joint RE & EE project proposal evaluation with training materials to share example of conducting cost benefit analysis (CBA) on successful projects.

### **3.2.9 Accommodating Disruptive Technology into RE&EE Policy for Energy Security (EWG 11 2019A/Thailand) – Status: On-going**

The objectives of this project were:

- i. To review the impact of disruptive technologies on the power generation and distribution, transport, and buildings sector.
- ii. To share best practices on RE&EE policy to accommodate the disruptive technologies.
- iii. To build capacity on integration of the disruptive technologies for energy security.

Project scope included:

- i. 3-day workshop in April 2021 in hybrid mode.

Outcome of this project included:

- i. Recommendations on necessary RE & EE policies to accommodate disruptive technologies.

### **3.2.10 Integrating Electrical Vehicles and Solar Rooftop PV in Electricity Distribution Systems with Continued Performance of Distribution Transformers (EWG 03 2020A/Thailand) – Status: BMC Approved**

The objectives of this project were to support the sustainable modernization of electric distribution systems in the APEC region as required by the growing need to increase deployment of electric vehicles and rooftop solar PV in the target economies, and to build the capacity of APEC economies' utilities and policy-makers to understand and address the technical, environmental, and economic impacts on distribution transformers of connecting rooftop solar PV installations and electrical vehicles charging stations to electricity distribution systems. The study would be started in December 2020.

### **3.2.11 APEC Workshop on Integrated Energy-Water Planning and Policy Formulation (EWG 13 2018A/US) – Status: Completed**

This project was led by Pacific Northwest National Laboratory, ICA and UL. This project expended a 2008 project conducted by China on motor efficiency and aimed to inform the regulatory and policy environments within APEC and ASEAN regions of the benefits of harmonization of standards and conformity assessment approaches to facilitate trade of energy efficient electric motors and accelerate progress toward energy intensity reduction in the region. The project was supported by EWG 04 2019S and received a time extension and was completed in August 2020.

### **3.2.12 Coordinating Standards for Cool Roof Testing and Performance (EWG 14 2018A/US) – Status: Completed**

The project was being led by the US DOE Buildings Technology Office. Space conditioning loads that were directly affected by the building envelope, including window, walls, roof and foundation, were responsible for approximately 30% to 50% of building electricity consumption, which made up approximately 50% of total electricity consumption in APEC economies. Cool roof and wall reduce space cooling energy demands by 20% and were particularly valuable in reducing peak demand. A number of APEC economies had adopted or were considering standards for the testing and performance requirements for reflective, “cool” surface technologies on roofs and walls. This project would develop a review and

comparison of cool surface testing and performance standards in place or under consideration in APEC economies and provide a roadmap for establishing cool surface product testing and rating infrastructure in economies that did not have access to it. The project had received a time extension and was completed in September 2020.

### **3.2.13 APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy (EWG 06 2019A/US) – Status: On-going**

The key project objective was to promote information sharing and capacity building across APEC universities. The project included:

- i. A two-and-a-half-day workshop to bring together APEC members, faculty from APEC Universities, and members of APERC to talk about potential EWG/University collaboration.
- ii. Discuss potential research projects for University students to work in classes that would be most beneficial to the EWG, and determine how to identify potential projects in the future.
- iii. Identify best practices for project communication both between the EWG and University faculty as well as between faculty participants.
- iv. Discuss best methods for sharing project results from University students.
- v. Facilitate networking between APEC members, University faculty in APEC economies, and APERC to develop a consortium of Universities to provide support for the work of the EWG.

### **3.2.14 Sustainable Mobility: Routes for integrating the Energy and Transport Sectors for Urban Cities (EWG 05 2019A/US) – Status: On-going**

The key objectives were to promote sustainable mobility across the APEC region. The project included:

- i. To deliver a Sustainable Mobility - City Solutions Case study that addresses policy and technical guidelines for the implementation of sustainable, high-capacity public and shared transport systems, with existing infrastructure, or with examples of successful improvements. This case study will address clean transport solutions, stakeholder engagement processes, joint-policies and pilot programs with the energy-sector that would further consolidate the energy-efficiency aspects.

- ii. To build capacity and increase knowledge in APEC member economies with technical training, policy advice and sharing of regional and international good practices. This will be achieved via a workshop, which will be open to all APEC and non-APEC economies.
- iii. To provide a long-term platform for continued dialogue, knowledge sharing and learning within the APEC economies by incorporating interested APEC members into Asia’s Clean Mobility Community of Practice, which will enable cities to be a regional leader in providing City-level solutions.

The project would apply findings from an existing APEC project (EWG 10 2018A) focused on pathways to integrate the energy and transport sectors in APEC island communities, in APEC cities.

### **3.2.15 Evaluation of Energy Technologies, Programs and Policies (EWG 12 2019A/US) – Status: On-going**

The objectives of this projects were:

- i. To build capacity in evaluation and raise awareness in policy makers.
- ii. To strengthen an enabling environment for evaluation through bringing policy makers and evaluation practitioners together.
- iii. To strengthen institutional capacities of public and private organisations through their participation and discussion.
- iv. To provide additional evaluation material and contacts to the Energy Evaluation Asia Pacific (EEAP) organisation, one of the successful outcomes of the first APEC evaluation workshop.

### **3.3 Concept Notes Presentation**

Two (2) nos. of concept notes were presented in the meeting as follows:

<b>APEC Concept Notes</b>		<b>Proposing Economy</b>
1	APEC Green Data Centre	Hong Kong, China
2	Industrial Capacity Building on Energy Efficiency Performance in APEC Region	Thailand

### 3.4 Economy Update

A meeting theme “Green Recovery through Energy Efficiency” was proposed by Hong Kong, China. Member economies were encouraged to share the energy efficiency stimulus packages and programmes, energy efficiency policies and investment for post COVID-19 recovery. The Co-chair, Mr. Chu Kei-ming, Barry, stated that the COVID-19 pandemic had created a global crisis to the health system as well as economies around the world. Many APEC member economies’ activities had been affected due to economy slow down, lockdown of cities, travel restrictions, etc. APEC member economies needed to seize this moment to think ahead on energy efficiency strategies for stimulating and reviving their economies once the COVID-19 would be brought under control and activity could ramp back up.

Nine (9) APEC member economies presented the updates on key developments in energy efficiency policies and programmes, as well as on the meeting theme.

3.4.1 **Australia** reported their recent energy efficiency activities and the use of information technology to support economy growth.

3.4.2 **China** reported its new carbon emission peak and carbon neutral targets, the outlook on energy efficiency in 14<sup>th</sup> five-year plan (FYP 2021 – 2025) and the long-range objectives through the year 2035.

3.4.3 **Hong Kong, China** reported the latest energy end-use data 2020 and energy intensity reduction progress. The updates on energy efficiency initiatives including mandatory energy efficiency labelling scheme, building energy efficiency ordinance, green energy target, green school 2.0 programme and Green Tech Fund.

3.4.4 **Indonesia** reported its Government’s actions to support energy efficiency and the regulation framework including the energy conservation targets and strategies.

3.4.5 **Japan** reported the international comparison of total primary energy consumption per GDP, energy supply and demand structure toward CO<sub>2</sub> emissions reduction target in 2030, energy efficiency and conservation policy framework, the latest developments in energy efficiency efforts and the 2050 net zero carbon target.

3.4.6 **Malaysia** reported its energy efficiency program under the Energy Efficiency and

Conservation Act (EECA).

- 3.4.7 **Chinese Taipei** reported its energy efficiency situation and energy efficiency management. The achievement of energy saving in 2019 was also reported.
- 3.4.8 **Thailand** reported the energy status 2019, energy efficiency plan 2018, and the implementation and progress of energy conservation programme.
- 3.4.9 **The United States** reported its energy efficiency research, the Cities Leading through Energy Analysis and Planning (Cities-LEAP) programme, and US top energy efficient businesses and industries.

### 3.5 EGNRET Update by Dr. Tarcy Jhou, EGNRET Secretariat

EGNRET Secretariat presented the meeting summary of the 54<sup>th</sup> meeting of APEC EGNRET held on 10-11 November 2020, and the results of the Chair and Vice-chair selection for the 2021-2022 term. The upcoming EGNRET meeting arrangement and the EGNRET project update was also introduced by the EGNRET Secretariat.

### 3.6 IEA Presentation by Dr. Brian Motherway, Head of Energy Efficiency Division, IEA

Dr. Brian Motherway presented IEA's plan for a sustainable recovery which provided an integrated approach to support economic recovery and jobs while improving the resilience and sustainability of the energy system. The Global Commission for Urgent Action on Energy Efficiency was introduced with the 10 recommendations on energy efficiency. Dr. Motherway further introduced the latest development of the International Energy Efficiency Hub.

### 3.7 Discussion

#### 3.7.1 Cross Fora and Organisations Cooperation

EGEEC Chair reported that EGEEC was tasked by EWG to liaise with the International Partnership for Energy Efficiency Cooperation (IPEEC) on potential collaboration between EGEEC and IPEEC. Since IPEEC's Terms of Reference had expired in December 2019, EGEEC suggested to EWG at EWG 59 on terminating the liaison with IPEEC and seeking collaboration with the International Energy Efficiency Hub (EE Hub) through International



Energy Agency (IEA). EGEEC had invited IEA to introduce the International EE Hub development in the meeting and would continue to explore the collaboration areas.

### **3.7.2 Energy Efficiency Improvement as Policy Solutions**

EGEEC Chair reported that the Lead Shepherd tasked EGEEC to discuss energy efficiency improvement as policy solutions for reporting at the EWG 60. EGEEC Chair mentioned that the EGEEC Secretariat would consolidate the views gathered from APERC's Energy Efficiency Policy Workshop, Member Economies' Updates and IEA's insights on energy efficiency and sustainable recovery and sought the consensus from EGEEC members before reporting at the EWG 60. The US suggested that EGEEC might follow up with member economies on the effectiveness of their policy solutions on energy efficiency improvement.

### **3.7.3 APEC Energy Intensity Reduction Goal**

EGEEC Chair reported APERC's latest energy intensity reduction projection. EGEEC Chair reminded members that in view of Covid-19, the APEC energy intensity decline trend may reverse, if the change in GDP falls faster than the changes in energy consumption. The trend would be affected by the recovery of the economy, whether the pandemic could be put under control shortly and whether there were stimulus programmes to create jobs and boost economies afterwards. EGEEC Chair pointed out that travel restriction had affected the works all over the world which also impacted the research work on energy intensity projection. EGEEC would keep in view the situation and would continue to review with APERC on the work areas discussed at the EGEEC 54. As the energy data of 2020 would be available in 2020(?), EGEEC would continue to monitor the impact of the COVID-19 on the energy intensity trend.

Japan suggested that at the coming EGEEC meetings, economies might report their status of energy intensity reduction for further discussion. EGEEC secretariat would consider to include this topic in the agenda of upcoming EGEEC meetings.

### **3.7.4 New Zealand Policy Dialogue**

EGEEC Chair reported that the theme of New Zealand's policy dialogue in 2021 would be "Incentives and tools for accelerating development of low emissions energy". EGEEC

members were encouraged to share views on the theme with New Zealand and the EGEEC Secretariat would circulate the policy dialogue paper once received from EWG.

### **3.7.5 Key Areas for Collaborative Actions / Joint Activities between Expert Groups**

EGEEC Chair reported the key areas for collaborative actions / joint activities between Expert Groups as follows:

- 3.7.5.1 The first joint EGEDA 31 and EGEEC 55 meeting held on 19 – 20 November 2020 virtually and hosted by Hong Kong, China.
- 3.7.5.2 The APEC DCHS workshop held on 17 November 2020 alongside the joint meeting.
- 3.7.5.3 EGEEC would continue to work with EGEDA on district cooling / heating system (DCHS) applications and data collection.
- 3.7.5.4 EGEEC would continue to collaborate with EGEDA in organising joint meetings and workshops.
- 3.7.5.5 EGEEC would explore with EGEDA on the energy efficiency applications and energy data collection of green data center.
- 3.7.5.6 Joint EGEEC56 and EGNRET55 meeting would be held in the first half of 2021.
- 3.7.5.7 EGEEC would collaborate with EGNRET on the policy solutions post COVID-19.
- 3.7.5.8 EGEEC members suggested that EGEEC might work with EGEDA / APERC on data collection projects at city level.

## **3.8 EGEEC Governance Issues**

### **3.8.1 Review of Terms of Reference (ToR)**

EGEEC ToR was reviewed and no amendment was suggested by members.

### **3.8.2 EGEEC Chair and Co-chair Selection**

EGEEC Chair reported that the incumbent EGEEC Chair was elected in March 2019. According to EGEEC ToR, EGEEC elects one member economy as chair and one member economy as co-chair for a two-year (four-meeting) term of office. Due to COVID-19, there would be only one meeting in 2020. EGEEC Chair sought members' view on the timeline for the next EGEEC Chair and Co-chair Selection. EGEEC members reached

consensus that the next EGEEC Chair and Co-chair Selection would be held in the first half in 2021, i.e. the 56<sup>th</sup> EGEEC meeting.

### **3.8.3 EGEEC Contact List**

EGEEC Chair reported that the latest EGEEC contact list was circulated to members and reminded members to provide updated information to the EGEEC Secretariat.

### **3.8.4 EGEEC Website**

EGEEC Chair reported that the meeting documents of the EGEEC 54 were uploaded to the EGEEC Website and reminded members to send the EGEEC 55 presentation material to EGEEC Secretariat.

### **3.8.5 Date and Venue for Upcoming EGEEC Meetings**

EGEEC Chair announced that the 56<sup>th</sup> EGEEC meeting (EGEEC 56) would be hosted by Chinese Taipei in the first half of 2021. The EGEEC Secretariat would liaise with EGNRET Secretariat on the joint meeting arrangement.

EGEEC Chair further announced that the 57<sup>th</sup> EGEEC meeting (EGEEC 57) would be hosted by Australia in the second half of 2021.

### **3.8.6 Date and Venue for Upcoming EWG Meeting**

EGEEC Chair announced that the upcoming virtual 60<sup>th</sup> Energy Working Group Meeting (EWG 60) would be hosted by Japan on 7-11 December 2020.

#### **4. Joint Meeting of EGEEC 55 and EGEDA 31 (20 November 2020 12:00pm – 12:30am)**

##### **4.1 Expert Group Collaboration**

EGEEC Chair shared a number of collaboration opportunities as follows:

- 4.1.1 The first joint EGEDA 31 and EGEEC 55 meeting was held on 19 – 20 November 2020 virtually and hosted by Hong Kong, China.
- 4.1.2 EGEEC and EGEDA would continue to collaborate in organising joint meetings and workshops.
- 4.1.3 An APEC District Cooling and/or Heating Systems Workshop was held on 17 November 2020. EGEEC and EGEDA would continue to work on district cooling / heating system (DCHS) applications and data collection.
- 4.1.4 EGEEC and EGEDA would explore on the energy efficiency applications and energy data collection of green data center.

EGEDA Vice-Chair affirmed the possibility of the collaboration areas.

##### **4.2 Closing Remarks**

Mr. Pang Yiu Hung, Director of Electrical and Mechanical Services, the Government of the HKSAR, gave the closing remarks. In his Closing Remarks, Mr. Pang thanked all participants and declared the four-day event a success. He mentioned that the joint meeting and associated workshops had proved that the world is not only connected by the information technology but also by a noble cause, “the call and our commitment to join hands to tackle the pressing issues of energy, environment, climate, and sustainability of our future”. He was also pleased that energy intensity had been reduced by about 23% and more than 40% of renewable energy share had been increased. He thanked the participants for their contributions and support.



Asia-Pacific  
Economic Cooperation

APEC Expert Group on Energy Efficiency and Conservation (EGEE&C)  
Under the APEC Energy Working Group

## Appendix A – EGEEC 55 List of Participants

No	Full Name		APEC Sub-fora / Economy / Organisation	Organization
1	Ek Chin	Vy	EGEEC	Electrical and Mechanical Services Department
2	Jovian	Cheung	EGEEC	Electrical and Mechanical Services Department
3	Willy	YU	EGEEC	Electrical and Mechanical Services Department
4	Tetsuya	Shimokawa	APEC Secretariat	APEC Secretariat
5	Hugh	Marshall-Tate	APERC	Asia Pacific Energy Research Center
6	Yamashiro	Munehisa	APERC	Asia Pacific Energy Research Center
7	Steivan	Defilla	APSEC	APSEC
8	Zhexing	Yan	APSEC	APSEC
9	Li	Zhu	APSEC	APSEC
10	Tom	Lee	EGNRET	Industrial Technology Research Institute
11	Tarcy Sih-Ting	Jhou	EGNRET	Industrial Technology Research Institute
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14	Catherine	Zerger	Australia	Department of Industry, Science, Energy and Resources
15	Keith	Tarlo	Australia	Department of Planning, Industry and Environment
16	Ekaterina	Grazhdannikova	Australia	Department of Industry, Science, Energy and Resources
17	Matthew	Clark	Australia	Common Capital Pty Ltd
18	Henry	Adams	Australia	Common Capital Pty Ltd
19	Alberta	McAteer	Australia	Department of Planning, Industry and Environment



Asia-Pacific  
Economic Cooperation

APEC Expert Group on Energy Efficiency and Conservation (EGEE&C)  
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### Appendix A – EGEEC 55 List of Participants (Cont'd)

No	Full Name	APEC Sub-fora / Economy / Organisation	Organization
20	Pengcheng LI	EGEEC	CNIS
21	Meng LIU	China	CNIS
23	Ren Liu	China	CNIS
24	Kei Ming Barry Chu	Hong Kong, China	Electrical and Mechanical Services Department
25	Chung Yee Shum	Hong Kong, China	Electrical and Mechanical Services Department
26	Hon Chung Harry Lai	Hong Kong, China	Electrical and Mechanical Services Department
27	Hendro Gunawan	Indonesia	Directorate of Energy Conservation
28	Wahyu Lestari	Indonesia	Directorate of Energy Conservation
29	Kunaefi Kunaefi	Indonesia	Directorate of Energy Conservation
30	Puti Ekacitta	Indonesia	Ministry of Energy and Mineral Resource of Republic Indonesia
31	Naoko Doi	Japan	The Institute of Energy Economics, Japan
32	Siti Sarah Sharuddin	Malaysia	Ministry of Energy and Climate Change
33	Tin Song Wong	Malaysia	Ministry of Energy and Natural Resources
34	Falisya Noor Azam	Malaysia	Ministry of Energy and Natural Resources
35	Norazrin Rupadi	Malaysia	Energy Commission
36	Kumareshan Mardappan	Malaysia	Energy Commission
37	Nur Hamiza	Malaysia	Energy Commission
38	Marcos Pelenur	New Zealand	Energy Efficiency and Conservation Authority



## Appendix A – EGEEC 55 List of Participants (Cont'd)

No	Full Name	APEC Sub-fora / Economy / Organisation	Organization
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41	Henry Shin-Hang Lo	Chinese Taipei	Industrial Technology and Research Institute
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43	Warote Chaintarawong	Thailand	Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
44	Passarin Petchumli	Thailand	Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
45	Wisaruth Maethasith	Thailand	Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
46	Suthanee Wachasit	Thailand	Department of Alternative Energy Development and Efficiency
47	Ornanong Pongpaew	Thailand	Department of Alternative Energy Development and Efficiency
48	Nuttanon Jivapaisarnpong	Thailand	Department of alternative energy development and efficiency
49	Bloyd Cary	USA	Pacific Northwest National Laboratory
50	Jean-Marc Alexandre	ICA	International Copper Association
51	Pierre Cazelles	ICA	International Copper Association



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