

The 57th Meeting of APEC Expert Group on Energy Efficiency & Conservation (EGEEC 57)

Meeting Summary

7 – 8 October 2021

Virtual Meeting hosted by Australia

1. Introduction

The 57th Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEEC 57) was hosted by Australia from 7 to 8 October 2021.

Delegates from thirteen (13) APEC member economies, namely Australia; China; Hong Kong, China; Indonesia; Japan; Malaysia; Mexico; Peru, the Philippines; Singapore; Chinese Taipei; Thailand; and the United States, and representatives from six (6) APEC fora / sub-fora, including APEC Secretariat; Energy Working Group (EWG); Transportation Working Group (TPTWG); Expert Group on Energy Data and Analysis (EGEDA); Asia Pacific Energy Research Centre (APEREC); and APEC Sustainable Energy Center (APSEC) attended the meeting. Moreover, representatives from three (3) international organisations, namely the Green Building Council Australia (GBCA); International Energy Agency (IEA); and the International Copper Association (ICA), participated in the meeting as observers.

The list of EGEEC 57 participants was attached in Appendix A of the meeting summary.

2. EGEEC 57 (7 October 2021 09:00 – 12:00)

The EGEEC 57 was co-chaired by Mr Vy Ek-chin, Chair of EGEE&C and Mr Duncan McIntyre, Head of Energy Division, Department of Industry, Science, Energy and Resources of the Australian Government.

2.1 Official Welcome

The EGEEC57 was officially welcomed by Mr David Fredericks, Secretary of the Department of Industry, Science of the Australian Government. Mr. Fredericks firstly expressed respect to Australia's first people and welcomed all participants who attended the meeting. Mr Fredericks stated that the meeting provided the opportunity for member

economies and international organisations to discuss how technology can boost energy efficiency bringing crucial insights to the key policies and programs in improving the energy efficiency in APEC region.

2.2 Opening Remarks and Adoption of Meeting Agenda

Mr Vy Ek-chin, EGEE&C Chair, appreciated Australia for the hospitality in hosting the EGEE&C57. Mr Vy gave the opening remarks to highlight that energy efficiency and technology were well known to provide multiple benefits, including lowering costs, improving productivity, and boosting jobs and economic growth. He stressed that energy efficiency and technology played crucial roles in tackling climate change and facilitated a low-carbon APEC region. Through this inspiring meeting, he wished that members could share policies and experiences by using emerging technologies to promote energy efficiency and conservation and progress towards the APEC Energy Intensity Reduction Goal.

The EGEE&C 56 Summary was confirmed and the EGEE&C 57 Agenda was adopted by attending member economies.

2.3 Energy Development in Australia

Mr Duncan McIntyre, Head of Energy Division, Department of Industry, Science, Energy and Resources of the Australian Government, introduced the Energy Development in Australia. He stated that maintaining a resilient energy sector in 2021 was challenging due to the pandemic and natural disasters. The energy fuel mix of Australia, challenges of maintaining system reliability with variable renewable generation, low emission technology statements, budget to support affordable and reliable energy transition were also shared by Mr McIntyre.

2.4 Updates from APEC Secretariat / EWG / EGEDA / APERC / APSEC

Five (5) presentations were conducted as follows:

2.4.1 “APEC Secretariat Update” by Mr Takuo Miyazaki, Program Director, APEC Secretariat

APEC Secretariat presented the overall outcome of project session 1 and session 2, 2021. In project session 1, 2021, the approval rate of APEC funded projects was

77%, where BMC approved seven (7) EWG projects and all seven (7) projects were under QA process. In project session 2, 2021, the approval rate of APEC funded projects was 84%, where ten (10) EWG projects and one (1) PPSTI project were endorsed by EWG. APEC Secretariat also listed the important reminders when submitting APEC project proposals.

2.4.2 “EWG Update” by Ms Ariadne BenAissa, EWG Lead Shepherd

EWG Lead Shepherd updated APEC 61st Energy Working Group Meeting on 23-25 June 2021 was hosted by Brunei Darussalam. She shared the issues of EWG Terms of Reference (ToR), Steering Committee on Economic and Technical Cooperation (SCE) Fora Assessment, EWG Energy Security Initiative, Thailand’s policy dialogue on “Bio-Circular-Green Model: Energy Transition for Sustainable and Inclusive Growth”.

2.4.3 “EGEDA Update” by Ms Elvira Torres Gelindon, EGEDA Secretariat

EGEDA introduced the APEC energy efficiency indicators template. She highlighted the components of the template, including the energy sectors and activity data. She sought EGEE&C members’ assistance in providing energy data for the energy efficiency indicators template.

2.4.4 “APERC Update” by Mr Glen Sweetnam, Senior Vice President, APERC

APERC presented the historical energy intensity results for APEC region. Results revealed that energy intensity declined significantly in 2019 and fell 24.9% between 2005 and 2019. He also introduced APEC Energy Demand and Supply Outlook, 8th Edition, including two scenarios – (i) Reference Scenario, and (ii) Net-zero Scenario. The impact of COVID-19 on GDP would be incorporated in the 8th edition in the 2020-2025 time frame. The 8th edition was scheduled for publishing in Q2 of 2022.

2.4.5 “APSEC Update” by Dr Zhexing Yan, Researcher, APSEC

APSEC presented the research works on (i) solar-powered emergency shelter solutions for natural disaster in APEC (EWG 13 2019A); (ii) CNSC Pillar Program

including APEC self-funded project “APEC Integrated Urban Planning Report – Combining Disaster Resilience with Sustainability” (EWG 09 2019S); and (iii) “Research on Means to Overcome Shortage of Basic Urban Energy-climate Data” (EWG 04 2021S). APSEC also shared the results of “Workshop on the APEC Cooperative Network of Sustainable Cities”, “Research and Demonstration on Key Technologies of Comprehensive Utilisation of Wind, Solar and Geothermal Energy Based on Artificial Intelligence”, and other research works.

2.5 Invited Presentations

Three (3) invited presentations were conducted as follows:

2.5.1 “International Energy Agency Presentation” by Ms Mel Slade, Senior Programme Manager, IEA

IEA shared the Technology Collaboration Programme (TCP) and updated the Super-efficient Equipment & Appliance Development (SEAD) initiative in response to COP26.

2.5.2 “APEC Transportation Working Group (TPTWG) Presentation” by Mr Jason Hill, Chair of TPTWG

APEC TPTWG shared TPTWG reform, focus on electric vehicles, future works, and potential collaboration areas.

2.5.3 “Green Building Council Australia Presentation” by Ms Davina Rooney, Chief Executive Officer of GBCA

GBCA shared the mission and campaigns, in particular the built environment journey to net-zero buildings.

2.6 Project Updates Presentation

The status of fifteen (15) nos. of the APEC projects were reported and summarised 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 Integrated Urban Planning Report – Combining Disaster Resilience with Sustainability	China / APSEC	EWG 09 2019S	Completed
3	Research on Means to Overcome Shortage of Basic Urban Energy-climate Data	China / APSEC	EWG 04 2021S	On-going
4	Energy Intensity Reduction in the APEC Region’s Urbanised Cities	Hong Kong, China	EWG 08 2019A	On-going
5	APEC Workshop on District Cooling and/or Heating Systems (DCHS)	Hong Kong, China	EWG 08 2019S	On-going
6	Capacity Building Workshop on Retro-commissioning (RCx)	Hong Kong, China	EWG 09 2020A	On-going
7	APEC Funded Project on Promoting Energy Efficient and Resilient Data Centre in the APEC Region	Hong Kong, China	EWG 05 2021A	QA Process
8	APEC Youngsters Forum: Raising Awareness on Energy Conservation and Energy Efficiency among High School Teachers and Students in the Asia-Pacific Region	Indonesia	EWG 12 2020A	On-going
9	APEC Peer Review on Energy Efficiency (PREE) Phase 10	Japan / APEREC	EWG 07 2019A	On-going
10	APEC Peer Review on Energy Efficiency (PREE) Phase 11	Japan / APEREC	EWG 02 2021A	QA Process
11	Exploring Co-Benefit Opportunities for Renewable and Energy Efficiency Projects in the APEC Region	Thailand	EWG 04 2019A	On-going
12	Accommodating Disruptive Technology into RE&EE Policy for Energy Security	Thailand	EWG 11 2019A	On-going
13	Integrating Electrical Vehicles and Solar Rooftop PV in Electricity Distribution Systems with	Thailand	EWG 03 2020A	On-going

	APEC Project Title	Proposing Economy	Project No.	Status
	Continued Performance of Distribution Transformers			
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

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

The objective of the project was to identify and document best practice guides for the design and review of energy efficiency incentive schemes. The project overseers introduced the energy efficiency obligation scheme. A Best Practice Handbook for Establishing and Enhancing Energy Efficiency Obligation Schemes was submitted in July 2021 and was currently under review by APEC. An overview of the handbook was also introduced by the Project Overseer.

2.6.2 Research on the Role of Urban Planning for Addressing Climate Change and Disasters (EWG 09 2019S - China/APSEC) - Status: Completed

The purpose of this self-funded project was to identify how urban planning of APEC cities can be improved for creating resilience to the increasing number of extreme climate events and other disasters. The publication of the APEC Report on Integrated Urban Planning for Climate and Disaster Resilience, was released in July 2020.

2.6.3 Research on Means to Overcome Shortage of Basic Urban Energy – Climate Data (EWG 04 2021S - China/APSEC) - Status: On-going

This self-funded project aims at exploring the feasibility of constructing an urban Sustainable Development Goals (SDG) database for APEC cities provisionally called “APEC Urban SDG Tracker for Energy and Climate”. The purpose of this database was to contribute to filling the data shortage of SDG-relevant urban data as described in project reports EWG 11 2018S and EWG 09 2019S. The latter also explained the benefits of simultaneously addressing local SDG indicators and

criteria of the Disaster Resilience Scorecard for Cities. The planned activities comprised (i) discussing the definition of the feasible input data sets and the desired output visualization tools with a group of APEC pilot cities and a data user group; (ii) programming the input and output portals and the database; (iii) receiving feed-back from the test runs; and (iv) discussing ways of how knowledge transfer and capacity building would be organised for further development.

2.6.4 APEC Workshop on Energy Intensity Reduction in the APEC Region's Urbanised Cities (EWG 08 2019A - Hong Kong, China) – Status: On-going

The objective of this project was to develop a guide for policymakers, particularly for developing economies, to urbanise their cities to a low aggregated energy intensity in one sitting. The energy efficiency policies and energy intensity reduction performance of seven selected urbanised cities in APEC member economies were analysed. The conceptual study was completed and the study report was submitted on 24 Aug 2020. Furthermore, a workshop was conducted on 23 Mar 2021 with over 100 participants from twelve APEC member economies and seven organisations. The final study report was under review by the member economies.

2.6.5 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 share the experience and best practices with the workshop participants from various economies. The virtual workshop was successfully held on 17 November 2020 alongside EGEDA 31 and EGEEC 55, with over 110 participants from fifteen (15) APEC member economies and sixteen (16) organisations. The Workshop summary was submitted in July 2021 and under reviewed by APEC Secretariat.

2.6.6 APEC Capacity Building Workshop on Retro-commissioning (RCx) (EWG 09 2020A - Hong Kong, China) - Status: On-going

This project aimed to promote RCx in the APEC region by providing a platform for fostering the growing importance of RCx from the perspective of improving energy efficiency in driving progress toward APEC's energy intensity reduction goal and increasing employment opportunities and economic activities post COVID-19. An online workshop and training would be organised on 20 and 21 January 2022.

2.6.7 Promoting Energy Efficient and Resilient Data Centres in the APEC Region (EWG 05 2021A - Hong Kong, China) - Status: QA Process

This project aimed to analyse the energy efficiency and resilience policies, international guidelines and standards, practices and the deployment of innovative technologies for the data centre to progress towards “Digital Economy”. A capacity building workshop would be organised to share policies, standards, guidelines, best practices and advanced technology for the deployment of green data centres.

2.6.8 APEC Youngsters Forum: Raising Awareness on Energy Conservation and Energy Efficiency among High School Teachers and Students in the Asia-Pacific Region (EWG 12 2020A - Indonesia) - Status: On-going

This project aimed at raising youngsters’ awareness on energy efficiency and conservation in APEC economies. Energy efficiency and conservation became more significant during the COVID-19 pandemic as the energy consumption trend shifted from commercial to household. This project would build the capacity of policymakers, high school teachers, and high school students through a series of events, including knowledge and lessons-learned sharing. A workshop targeted to be held in March 2022 would increase youth awareness on energy efficiency and conservation.

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

The PREE Phase 10 was a follow-up from the last PREE Indonesia in 2011. It was originally scheduled to be held in 2020. Due to COVID-19, it had been postponed to 8-12 November 2021 using an online format. This peer review would focus on institutional frameworks and policy, building sector and industrial sector, and provided an opportunity to stock-take on the progress made over the past decade. An Energy Efficiency Policy Workshop themed “Economic Recovery through Energy Efficiency” was held on 18 November 2020. The workshop report was published on the APEC website in January 2021.

2.6.10 APEC Peer Review on Energy Efficiency (PREE) Phase 11 (EWG 02 2021A – Japan/APERC) – Status: QA Process

The PREE Phase 11 was under the QA process. An energy efficiency policy workshop was targeted to be held alongside EGEEC 58. The workshop's topic was under development and would focus on policy impact assessment best practices and energy efficiency in Industrial Sector.

2.6.11 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-benefits;
- ii. To develop guidelines with criteria and framework for RE&EE projects with co-benefits;
- iii. To share an example of cost benefit analysis (CBA) on successful projects; and
- iv. To build capacity and network for potential co-benefitting EE&RE project developers.

Two workshops were organised on 18-19 March 2021 and 19-20 July 2021, respectively, in virtual-hybrid format. Key success factors were extracted from successful RE & EE projects & policy criteria in APEC. Technical criteria for RE & EE co-benefit were finalised through Eligibility-Priority-Scoring APEC proposal evaluation. Eighty-two (82) participants from thirteen (13) member economies attended the first workshop; and fifty-three (53) participants from nine (9) member economies participated at the second workshop. The final report would be submitted by 31 October 2021.

2.6.12 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 the integration of disruptive technologies for energy security.

A workshop was organised on 29-30 April 2021 in a virtual format with ninety-eight (98) participants from thirteen (13) APEC member economies. Best practices on disruptive technology supporting RE & EE policies were shared at the workshop. In addition, participants brainstormed on RE & EE policies for the smooth integration of disruptive technologies. The final report with policy recommendations was submitted.

2.6.13 Integrating Electrical Vehicles and Solar Rooftop PV in Electricity Distribution Systems with Continued Performance of Distribution Transformers (EWG 03 2020A - Thailand) – Status: On-going

The project aimed to increase EV charging stations and solar rooftop PV connected to the grid that affects the performance of distributed Transformers and stability of the grid. The objectives of this project were to describe and quantify the problems and propose technical and policy solutions to mitigate the issues. The project would review international and APEC experiences. A workshop would be organised in March 2022.

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

The objective of this project was to find integrated pathways for sustainable mobility – specifically finding key coordination points between the transport and energy sectors at the initial planning stages – that would enable greater deployment of clean transport options. A case study on “Planning a transition to electrification of public transit systems – Learnings from the bus rapid system of Metrobus in Mexico City” was carried out. A webinar and panel discussion to disseminate the case study findings was held in February 2021, and a capacity building virtual workshop was also held in August 2021.

2.6.15 Evaluation of Energy Technologies, Programs and Policies (EWG 12 2019A – the US) – Status: On-going

The objectives of this project were to bring together policymakers and evaluation practitioners to highlight evaluation methods and analysis, and to evaluate energy technologies, programs and policies. Four 2-hours webinar sessions were held in September 2021 for the purpose of evaluation; evaluation design; collecting data

for effective evaluations; strengthening the value of evaluation; and evaluation capacity building.

- i. To build capacity in evaluation and raise awareness in policymakers.
- ii. To strengthen an enabling environment for evaluation through bringing policymakers 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.

A virtual workshop was planned for September – October 2021.

2.7 Concept Notes Presentation

Two (2) nos. of concept notes were presented at the meeting and summarized below:

APEC Concept Notes		Proposing Economy
1	Data Driven Carbon Neutral Disaster Resilient Cities	China / APSEC
2	APEC Workshop Furthering University Collaboration to Support Data Gathering and Analysis in Energy Efficiency, Renewable Energy and Energy Resiliency	The US

3.1 Economy Updates

A meeting theme “Energy Efficiency and Technology” was proposed by Australia.

3.1.1 Australia introduced the Technology Investment Roadmap and the low emissions technology statement, Clean Energy Finance Corporation (CEFC) and Australian Renewable Energy Agency (AREA). The Trajectory for Low Energy Buildings, the National Australian Built Environment Rating System (NABERS) and Australia’s Digital Economy Strategy were also shared by Australia.

3.1.2 China reported its long term objectives for 2035 on energy revolution and its 14th Five-Year Plan (FYP 2021 – 2025) outlook in building an energy sector that is clean, low-carbon, safe and efficient. Financial support for new energy companies was also introduced by China.

- 3.1.3 Hong Kong, China** reported its new carbon neutrality target and the latest energy intensity reduction progress. Hong Kong, China also shared energy efficiency initiatives, including district cooling systems, mandatory energy efficiency labelling scheme, building energy efficiency ordinance, retro-commissioning, regional collaboration, Green Welfare NGOs initiative, green school 2.0 programme, Green Tech Fund and E&M InnoPortal and Green I&T Day.
- 3.1.4 Indonesia** reported its latest status of National Determined Contribution (NDC) and the final energy consumption from 2008 – 2020. Indonesia also introduced the national energy policy, various energy conservation programs, including standardization and labeling, energy efficient awareness, EV program, and strategy to achieve energy efficiency target and Government Regulation.
- 3.1.5 Japan** reported her 2050 Net Zero Carbon Target, Green Growth Strategy and realization of carbon neutrality by 2050.
- 3.1.6 Malaysia** reported the energy efficiency initiatives, Efficient Management of Electrical Energy Regulation, National Energy Efficiency Action Plan 2016-2025, Minimum Energy Performance Standards and way forward for energy efficiency.
- 3.1.7 Peru** reported the electrical energy supply and charging infrastructure for electric mobility, criteria for energy audits, energy efficiency labeling for energy equipment, energy efficiency in the public sector, systems and apps in energy efficiency, technical committees for standardization and energy efficiency awareness programmes. The management of climate change, including National Determined Contributions (NDC), was also shared by Peru.
- 3.1.8 The Philippines** introduced the Energy Efficiency and Conservation Act, energy efficiency investment and energy saving, guidelines on energy conserving design of buildings, and non-fiscal incentives on energy efficiency and conservation.
- 3.1.9 Singapore** introduced the Singapore Green Plan 2030, which is Singapore's sustainability agenda over the next ten years. Singapore also shared the support to local research institute on low carbon technologies.
- 3.1.10 Chinese Taipei** reported the energy conservation goal and the energy efficiency enhancing measures, including mandatory and voluntary labeling programs, and a new power saving campaign. Chinese Taipei also shared energy technologies for air conditioners and refrigerators.

3.1.11 Thailand reported their energy status 2020, Thailand's integrated energy blueprint and the energy efficiency plan 2018. Thailand further introduced energy management systems, including energy managers and auditors.

3.1.12 The United States reported her "Better Building Initiative" which was designed to improve the lives of the American people by driving leadership in energy innovation through building partnerships. The activities on energy efficiency and renewable energy under the initiative were introduced.

3.2 Discussion

3.2.1 APEC Energy Intensity Reduction Goal

APERC presented the analysis of energy intensity trends in APEC from 2005-2018, particularly the subsector contribution on energy intensity. APERC pointed out that each sector had made a similar contribution to the overall energy intensity reduction. The sub-sector breakdown and in-depth sectoral analysis of energy intensity reduction of some APEC economies, namely China and Malaysia (dominated by industry); Chinese Taipei (leading APEC energy intensity); and Indonesia (concentrated in residential buildings).

APERC analysis also advised that government policy had driven fuel economy improvements in Japan, Thailand, and the US, leading to the energy intensity of the transport sector.

3.2.2 Cross Fora and Organisations Cooperation

EGEE&C Chair reported that EWG members supported EGEE&C to explore collaboration with International Energy Efficiency Hub (EE Hub). EGEE&C Co-chair, Dr LI Pengcheng, updated that the EE Hub currently had 16 members and the EE Hub Secretariat had been established through IEA. EGEE&C would keep in view the latest development of the EE Hub with a view to building up the connection with the EE Hub's administration.

EGEE&C Chair had invited IEA to share their Technology Collaboration Programme (TCP) and update the SEAD initiative in response to COP26. EGEE&C would continue collaborating with IEA to scale up energy efficiency to mitigate

climate change, improve energy security, and grow economies while delivering environmental and social benefits.

EGEE&C Chair had invited APEC TPTWG to share her reform, focus on electric vehicles, future works and potential collaboration areas. EGEE&C would explore collaboration opportunities with TPTWG on the energy efficiency of transportation, in particular vehicles.

EGEE&C Chair had invited GBCA to share her mission and campaigns, particularly the built environment journey to net-zero buildings. EGEE&C would explore collaboration opportunities with World Green Building Council and its global members on high energy efficiency buildings, energy retrofits or retro-commissioning in the existing buildings etc.

EGEE&C Chair suggested exploring collaboration opportunities with Collaborative Labelling and Appliances Standards Program (CLASP). CLASP Policy Resource Center (CPRC) was a hub for information on energy efficiency, water efficiency, and quality policies for appliances and equipment. CPRC facilitates policymakers and practitioners to explore energy efficiency policies globally, enabling internationally informed decisions.

3.2.3 Key Areas for Collaboration with APEC Expert Groups

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

Collaboration with EGEDA

- EGEE&C and EGEDA would collaborate on the energy efficiency applications and data collection for DCHS and the green data centre.
- EGEDA Secretariat introduced the energy efficiency indicators template and sought members' assistance in collecting energy data for the energy efficiency indicators.

Collaboration with EGNRET

- EGEE&C and EGNRET would explore the occasion to organise a joint meeting and joint workshop in 2022.
- EGEE&C and EGNRET agreed to explore the opportunity to organise joint workshops to progress toward EE&RE goals.

3.3 EGEE&C Governance Issues

3.3.1 Review of Terms of Reference (ToR)

The draft EGEE&C ToR was endorsed by EGEE&C & EWG members, and was subject to SCE's approval.

3.3.2 EGEE&C Contact List

EGEE&C Chair reported that the EGEE&C contact list was circulated to members in October 2021 and advised members to provide updated information to the EGEE&C Secretariat.

3.3.3 EGEE&C Website

EGEE&C Chair reported that the meeting documents of the EGEE&C 56 were uploaded to the EGEE&C Website and reminded members to send the EGEE&C 57 presentation material to EGEE&C Secretariat.

3.3.4 Date and Venue for Upcoming EGEE&C Meetings

EGEE&C Chair announced that China would host the 58th EGEE&C in the first half of 2022. The EGEE&C Secretariat would liaise with China on the meeting arrangement.

EGEE&C Chair encouraged member economies to hosting the EGEE&C meetings in the second half of 2022 (i.e. 59th EGEE&C meeting) and in 2023 (i.e. 60th and 61st EGEE&C meeting).

3.3.5 Date and Venue for Upcoming EWG Meeting

EGEE&C Chair announced that the upcoming virtual 62nd Energy Working Group Meeting (EWG 62) would be hosted by Canada from 17-21 October 2021.

3.4 EGEE&C 57 Outcome

The EGEE&C Secretariat presented the key actions and items to be reported to EWG in the upcoming EWG 62.

Closing Remarks

Ms Lesley Dowling, General Manager, Industrial Energy Efficiency Branch, Department of Industry, Science, Energy and Resources of the Australian Government, gave the closing remarks. Ms Dowling thanked all delegates and colleagues for their participation. She addressed that the two-day EGEE&C57 was a successful virtual dialogue platform for member economies to share energy efficiency and technology policies and initiatives. She looked forward to meeting all EGEE&C members in person in the near future.



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

Appendix A – EGEEC 57 List of Participants

No	Full Name	Economy / APEC Sub-fora / Organisation	Organization
1	Caitlin Matthews	Australia	Australian Government Department of Industry, Science, Energy and Resources
2	Duncan McIntyre	Australia	Australian Government Department of Industry, Science, Energy and Resources
3	Lesley Dowling	Australia	Australian Government Department of Industry, Science, Energy and Resources
4	Sarah Bellinger	Australia	Australian Government Department of Industry, Science, Energy and Resources
5	Lauren Mackaway	Australia	Australian Government Department of Industry, Science, Energy and Resources
6	Chantelle Brown	Australia	Australian Government Department of Industry, Science, Energy and Resources
7	Melissa Cotterill	Australia	Australian Government Department of Industry, Science, Energy and Resources
8	Rhiannon Foster	Australia	Australian Government Department of Industry, Science, Energy and Resources
9	Stanford Harrison	Australia	Australian Government Department of Industry, Science, Energy and Resources
10	Samantha Griffin	Australia	Australian Government Department of Industry, Science, Energy and Resources
11	James Piko	Australia	Australian Government Department of Industry, Science, Energy and Resources
12	Alison Fleming	Australia	Australian Government Department of Industry, Science, Energy and Resources
13	Zeba Anjum	Australia	Australian Government Department of Industry, Science, Energy and Resources
14	Caroline Rugero	Australia	Australian Government Department of Industry, Science, Energy and Resources
15	Richard de Ferranti	Australia	Australian Government Department of Industry, Science, Energy and Resources
16	Pengcheng LI	China	CNIS
17	Ren Liu	China	CNIS
18	Liu Meng	China	CNIS



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No	Full Name	Economy / APEC Sub-fora / Organisation	Organization
19	Chun Yin Li	Hong Kong, China	EMSD
20	Leo CHENG	Hong Kong, China	EMSD
21	Arthur Lee	Hong Kong, China	EMSD
22	Barry Chu	Hong Kong, China	EMSD
23	FF Hendro Gunawan	Indonesia	Ministry of Energy and Mineral Resources
24	Arief Santoso	Indonesia	Ministry of Energy and Mineral Resources
25	Naoko DOI	Japan	Institute of Energy Economics Japan
26	ZULKIFLEE UMAR	MALAYSIA	SURUHANJAYA TENAGA
27	Kumareshan Mardappan	Malaysia	Energy Commission
28	Ahmad Zulhilmi Harun	Malaysia	Energy Commission
29	Siti Sarah Sharuddin	Malaysia	Ministry of Energy and Natural Resources
30	Dr. Ida Syahrina Shukor	Malaysia	Ministry of Energy and Natural Resources
31	Siti Sarah Sharuddin	Malaysia	Ministry of Energy and Natural Resources
32	Heberto Barrios Castillo	Mexico	Ministry of Energy of Mexico (SENER)
33	Heberto Barrios Castillo	Mexico	Ministry of Energy of Mexico (SENER)
34	Odón De Buen Rodríguez	Mexico	National Commission for the Efficient Use of Energy (CONUEE)



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Under the APEC Energy Working Group

No	Full Name	Economy / APEC Sub-fora / Organisation	Organization
35	Escandón Rodríguez Saraí Oreggia	Mexico	Ministry of Energy of Mexico (SENER)
36	ROSE- MARIE MICHILLOT	Peru	Ministry of Energy and Mines of Perú
37	ANCAJIMA GUERRERO	Peru	Ministry of Energy and Mines of Perú
38	Winer Zevallos Villayzan	Peru	Ministry of Energy and Mines of Perú
39	CLAUDIA ESPINOZA	Peru	Ministry of Energy and Mines of Perú
40	JESÚS CARRASCO	Peru	Ministry of Energy and Mines of Perú
41	Jose Alejandro Guerrero	Peru	Ministry of Energy and Mines of Perú
42	Claudia Espinoza	Peru	Ministry of Energy and Mines of Perú
43	Patrick Aquino	The Philippines	Department of Energy
44	Artemio Habitan	The Philippines	Department of Energy
45	Darryl Ang	Singapore	Energy Market Authority of Singapore
46	Regina Lee	Singapore	Energy Market Authority of Singapore
47	Henry Shin- Hang Lo	Chinese Taipei	Industrial Technology Research Institute
48	Shu-Mei Peng	Chinese Taipei	Bureau of Energy
49	Chiny-Yu Li	Chinese Taipei	ITRI



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

No	Full Name	Economy / APEC Sub-fora / Organisation	Organization
50	Munlika Sompranon	Thailand	Department of Alternative Energy Development and Efficiency
51	Warote Chaintarawong	Thailand	Department of Alternative Energy Development and Efficiency
52	Wisaruth Maethasith	Thailand	Department of Alternative Energy Development and Efficiency
53	Nuwong Chollacoop	Thailand	National Energy Technology Center
54	Worajit Setthapun	Thailand	Chiang Mai Rajabhat University
55	Kampanart Silva	Thailand	National Energy Technology Center (ENTEC)
56	Hathaithip Sintuya	Thailand	Chiang Mai Rajabhat University
57	Atchariya Jangchay	Thailand	Department of Alternative Energy Development and Efficiency, Ministry of Energy
58	Cary Bloyd	USA	PNNL
59	Ek Chin VY	EGEEC	EMSD
60	Jovian Cheung	EGEEC	EMSD
61	Willy YU	EGEEC	EMSD
62	Takuo Miyazaki	APEC Secretariat	APEC
63	Ariadne Benaissa	EWG	EWG
64	Hugh Marshall-Tate	APERC	APERC
65	Jeongdu Kim	APERC	APERC
66	Glen Sweetnam	APERC	APERC
67	Alexander Izhbuldin	APERC	APERC
68	Zhexing Yan	APSEC	APSEC
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Asia-Pacific
Economic Cooperation

APEC Expert Group on Energy Efficiency and Conservation (EGEE&C)
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No	Full Name	Economy / APEC Sub-fora / Organisation	Organization
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71	Li ZHU	APSEC	APSEC
72	Elvira Gelindon	EGEDA	APEREC
73	Edito BARCELONA	EGEDA	APEREC
74	Jason Hill	TWTWG	US Department of Transportation
75	Todd Peterson	APEC AD	US Department of Commerce
76	Davina Rooney	GBCA	GBCA
77	pierre cazelles	ICA	ICA