Summary record

35th EGEDA (Physical) Meeting Hosted by Hong Kong, China 17-19 January 2024

The 35th meeting of the APEC Expert Group on Energy Data and Analysis (EGEDA) was held onsite and hosted by Hong Kong, China, from 17-19 January 2024. The meeting was participated in by 36 members and guests, from nine member economies, APEC fora, expert groups and international agencies. These were from Australia; Brunei Darussalam; Hong Kong, China; Indonesia; Japan; Malaysia; the Philippines; Chinese Taipei and Thailand for member economies, APEC Secretariat, EWG secretariat, EGNRET, EGEEC, EGCFE for APEC fora and expert groups and colleagues from the International Energy Agency (IEA), and International Renewable Energy Agency (IRENA). The following were the outcomes of the meeting.

Day 1 – 17 January 2024

❖ Opening Session

The Secretary for Environment and Ecology of Hong Kong, China, Mr Tse Chin Wan, warmly welcomed the delegations of the 35th EGEDA Meeting. In his Welcome Remarks, he said that Hong Kong, China is honoured to host the EGEDA35 to provide a platform for direct dialogue among APEC partners.

Mr Tse said that APEC economies consume approximately 60 per cent of the world's energy. As the members continue their speedy recovery from the epidemic and their focus on economic development, energy consumption will continue to increase, leading to an exponential increase in carbon emissions. Thus, there is an imminent need to expedite the energy transition to an environmentally-friendly framework to achieve a climate-safe future.

He further said that Hong Kong, China is striving to achieve carbon neutrality before 2050 and pursue the reduction of Hong Kong, China's carbon emissions by 50 per cent before 2035 from the 2005 level. In this connection, Hong Kong, China is actively engaging with new energy technologies in accordance with the major decarbonisation strategies outlined in the *Hong Kong's Climate Action Plan 2050,* such as the Floating Storage and Regasification Unit at the Hong Kong Offshore Liquefied Natural Gas Terminal, district cooling systems, and new energy vehicles, etc. to achieve carbon neutrality before 2050. Mr Tse also encouraged using energy data analyses and modelling tools to provide insightful information on energy trends in driving the transition towards a sustainable future.

The newly elected EGEDA Chair, Mr Glen Sweetnam delivered his Opening Remarks. He thanked the host for the preparations made for the meeting and likewise thanked the members for their attendance. He looks forward to another two years of fruitful chairmanship and collaboration with the EGEDA members.

The Chair presented the proposed Draft Agenda and, hearing no objections from the members, adopted it.

- **Session 1: Guest presentation by Hong Kong, China**

The Director of Electrical and Mechanical Services, Mr Eric Pang, shared the latest energy developments in Hong Kong, China for the guest presentation. He thanked APEC member economies for their continued efforts to combat climate change and stressed that close cooperation must be maintained in order to meet the climate change challenges.

- **Session 2: Report on APEC activities**

This session included updates from APEC fora and APEC expert groups.

A. The APEC Secretariat Program Director, Mr Takayuki Niikura presented the updates on APEC activities, projects, and funding. One of the highlights of his presentation included the timeline of the APEC project session and APEC funding.

B. The EWG updates were delivered by Mr Barry Chu, the EWG Deputy Lead Shepherd. The presentation included the reports of the EWG65 and 66 meetings in 2023, the 13th Energy Ministers meeting, the Leaders Week in San Francisco, and the future EWG67 meeting in 2024 in Peru.

C. Mr Li Chun Yin, EGEEC secretariat presented the EGEEC updates on behalf of the EGEEC Chair. The presentation included the reports of its engagement in EWG activities, the EGEEC 61 meeting, EEC-related APEC projects and upcoming EGEEC meetings.

D. Ms An-Chi Fan, EGNRET secretariat delivered the EGNRET updates on behalf of the EGNRET Chair. The report included recent EGNRET activities, its fora collaborations, project updates, renewable energy goals and progress, and new renewable energy declaration.

E. The EGCFE Chair, Ms Reiko Eda, presented the updates on EGCFE activities. The presentation included its collaborations with other expert groups and the report about the 13th APEC Energy Ministerial Meeting in Seatle. It was announced that EGCFE 2024/EGEEC62 Joint Meeting will be held in Nanjing, China in May 2024.

Q&A

Mr Sweetnam, the EGEDA chair asked EGNRET about its consideration of the new declaration regarding tripling renewable energy capacity. Ms An-Chi Fan, EGNRET secretariat answered that its members will discuss the declaration at the next EGNRET meeting.

Mr Sweetnam asked Ms Gelindon about her insight about the APEC workshop on university collaboration on data gap analysis. Ms Gelindon suggested that we can collaborate because ESTO collects total data and universities collect detailed data.

Ms Gelindon and Mr Barcelona mentioned that EGEDA Secretariat collects renewable capacity data and installed maximum generation capacity data, but they do not separate renewable and non-renewable waste capacities. Mr Prime from IRENA mentioned that IRENA uses generation share as a basis to segregate renewable waste and non-renewable waste.

F. The EGEDA secretariat composed of Mr Edito Barcelona, Head of the EGEDA secretariat, Ms. Elvira Gelindon and Ms Ly Tran presented the EGEDA updates.

   Mr Barcelona reported on the status of annual data collection and gave a short analysis of the APEC energy demand and supply using the 2021 data.

   Ms Gelindon presented the EGEDA Energy Statistics Training Courses. Her presentation included the Special training course for Viet Nam officials and staff, short- and mid-term courses. These were all held onsite after two years of being held online due to the COVID-19 pandemic. She mentioned that due to budget cuts, the mid- and long-term training courses would be discontinued. The continuance of these training courses will be further announced in the future.

   Ms Tran presented the 21st APEC workshop on energy statistics, likewise, held physically in Tokyo after three years of holding it online. The workshop was participated in by 57 energy statisticians, experts and speakers from 14 member economies. This was also the first collaboration between EGEDA, EGNRET and EGCFE who all moderated specific sessions.

   In addition, Mr Barcelona mentioned the collection of greenhouse gas emissions data such as fugitive methane emissions in APEC. The EGEDA secretariat asked the members if there are efforts in place to collect or estimate fugitive emissions. EGCFE Chair announced that it is considering working with APERC on “Capacity building for clean and efficient use of fossil fuels by reducing fuel leaks” as an EGCFE project.

   Brunei Darussalam has directly collected data on fugitive emissions. Going forward, most economies will use UNFCCC reporting.

❖ **Session 3 Report on tracking the APEC energy goals**

A. Ms Gelindon presented the progress of APEC goals. She highlighted that GDP and energy consumption rebounded significantly in 2021. While the overall progress on the energy intensity goal (with 2005 as the base year) continued to improve and is most likely on its way to meeting the target. The energy intensity for some economies, on the

other hand, increased from 2020 to 2021. The doubling share of renewable goal was likewise presented and showed that in primary supply, final energy consumption and power generation, renewable shares notably increased. This also shows that if the trend continues, APEC is on its way to meeting its RE goal.

The APEC Outlook 8th Edition likewise projected that APEC will likely meet the dual energy goals in both Reference and Carbon Neutrality scenarios.

B. The EGEDA Chair delivered a presentation about possible new APEC goals. Despite being ahead of the APEC energy goals, the revision of existing APEC energy goals is currently on hold. On the other hand, Mr. Sweetnam mentioned the two possible new goals that have been discussed among economies but not yet adopted by consensus. The first involves power sector decarbonization, while the second focuses on the reduction of methane emissions. Given the member economies' interest in these items, ESTO will collect, estimate, and report relevant data, and APERC will make projections based on that data for the first possible goal and propose capacity-building initiatives for the second one. Regarding the global goal of tripling renewable energy capacity mentioned in the APEC Leaders Golden Gate Declaration, it remains uncertain whether APEC will adopt the declaration as a goal.

   After Mr. Sweetnam's presentation, each economy shared their methods of collecting/calculating/estimating methane emissions data. While some have established regulatory frameworks, others lack them. Collection methods vary among economies; some have multiple operators using monitoring equipment directly, while others rely on estimations using the UNFCCC reporting method. Some economies combine both approaches. Despite these variations, everyone recognizes the current methods' shortcomings and expresses a collective hope to collaborate and find a better approach for the collection of methane emissions data. Regarding the global goal of tripling renewable energy capacity by 2030, Ms. Reiko Eda reminded the group that the goal for APEC would be a collective goal wherein APEC as a whole can contribute to the global goal.

❖ **Session 4: Joint Organizations Data Initiative (JODI)**

A. Ms Allyson Cutright of IEF was not able to participate due to sudden illness. The presentation that she prepared on the global progress of JODI was read by Mr Edito Barcelona. Ms Cutright highlighted the importance of monthly data especially for energy security. She also pointed out some data errors and encouraged member economies to correct them.
B. The EGEDA secretariat, Mr Nobuhiro Sawamura delivered the update for the progress of JODI in APEC. The presentation included an assessment of participation in JODI based on sustainability, timeliness, and completeness.

During the Q&A, noting the excellent participation of Chinese Taipei in JODI, the EGEDA Chair asked the economy's focal point to share with other economies their approach on data collection. The EGEDA Vice-Chair, also a representative of Chinese Taipei, explained that the

economy announced the implementing regulation requiring companies to submit data by the 20th of every month and the submissions are online. This made the preparation of monthly JODI Oil and Gas submissions be prepared with just a click of a key in the computer.

The EGEDA Chair wrapped up the first day of the meeting. He mentioned that the first day of the meeting was very productive and he is looking forward to a productive second day.

Day 2 – 18 January 2024

- **Session 5: APERC research activities**

  The 2nd day of the meeting kicked off with Mr Sweetnam's presentation on APERC ongoing and future activities. He mentioned that modelling and other related works on the APEC Outlook 9th Edition are ongoing. He also mentioned the other APERC activities, such as APEC Energy Overview, APERC Cooperative activities, etc. The key takeaway of his presentation was the importance of the APEC/EGEDA data in the APEC Outlook.

- **Session 6: Energy efficiency indicators**

  Mr Domenico Lattanzio, Statistics Manager of IEA, reported IEA's global efforts on energy efficiency indicators. The presentation showed that data collection has expanded to 61 countries and economies. The data is disseminated through a data explorer. IEA is also engaged in training activities in energy indicators and published a guide to developing a roadmap for demand side data and energy efficiency indicators.

  On the question of how data are validated, Mr Lattanzio responded that data are compared with the annual data and third-party sources. Deeper validation is done through communication with the member countries. Regarding energy security, Mr Lattanzio responded that grid reliability is also now being monitored by the IEA.

  On the question about how checking is done on the energy efficiency template, Mr Lattanzio mentioned that IEA can develop a Python code that countries can use for data validation. On the changes to the Excel template that are done from time to time affecting automated data processing, Mr Lattanzio mentioned that using CSV files could address this issue.

  There was also a question about data migration to a new system and how to ensure that historical data are not lost, Mr Lattanzio mentioned that all data are pulled-out from the old system and then transferred to the new system.

  For APEC, Ms Gelindon presented the EGEDA secretariat's efforts in collecting energy efficiency indicators. She highlighted the collaboration works with IEA and the project they implemented to develop a methodology for estimating end-use consumption/ energy efficiency indicators.

  IEA added that training is really important, sharing that IEA implemented a project called "EU4Energy" for eastern European countries that was done three years ago. He shared that the skills obtained by the countries helped them fill-out the EEI template.

Malaysia shared the plan to hold an end-use energy consumption survey that will cover 12,000 samples (2000 from manufacturing and 5000 each from the residential and commercial sectors). They are now in the process of hiring a consultant that will implement the survey.

The Philippines also shared that they already conducted a comprehensive regional energy study in the Philippines (CRESP) that covered all sectors and produced energy balance table for all the regions. The household energy consumption survey has already started in 2023 and is expected to be completed by the end of this year. They are also planning to expand the survey to cover establishments and the transport sectors.

- **Session 7: new data collection**

A. Mr Barcelona delivered a presentation on APEC's perspective on collecting data on new energy products and technologies, such as hydrogen production and utilization, district cooling, grid-scale battery storage and consumption of electric, hybrid and hydrogen vehicles. His presentation also included the ongoing discussions of these new products and technologies' inclusion in the Standard International Energy Classification.

B. From the IEA's perspective, Mr Lattanzio presented a collection of new energy technologies. His report included a methodology to collect hydrogen and grid-scale battery storage data through the annual questionnaires.
Chinese Taipei recommended to clarify whether we consider district cooling as an energy source or an energy conservation measure. It asked about how IEA is thinking about it. Mr. Lattanzio answered IEA is discussing internally how better IEA can represent district cooling. Mr. Sweetnam asked if IEA is collecting both energy and non-energy use of hydrogen data and Mr Lattanzio answered that IEA is interested in tracking the hydrogen, therefore, non-energy use is also tracked to guarantee the balance of the commodity.

C. Mr Julian Prime, Head of Statistics at IRENA, reported about IRENA's energy taxonomy and 2023 off-grid energy statistics. He also presented the roadmap for the next steps for internal statistics implementation of taxonomy including hydro, wind, marine power, biofuels, energy storage, and hydrogen. His presentation included off-grid capacity for solar power, hydropower, wind energy, biogas, and other solid biofuels and off-grid energy access.

   Mr. Sweetnam asked if CCUS is included in the taxonomy. Mr. Prime answered that the IRENA taxonomy includes this.

- **Session 8: Round table discussion**

A. One of the highlights of the EGEDA35 meeting was the round table discussion on the members' updates in collecting new energy products and technologies. The following were raised:

Economy	Discussion
Australia	1. Mandatory data reporting includes hydrogen data but limited details on how it is produced. 2. Grid scale battery storage is also included in mandatory data reporting; but more investigations might be required to validate the data. 3. For EVs, there are estimates of electricity consumption.
Brunei Darussalam	1. Brunei is still in early stages on the new technologies. 2. EV charging is currently not recorded as separate in any of the sectors. Number of EVs is very small at the moment-below 100.
Hong Kong, China	1. Hydrogen - HKC launched the trial of the first hydrogen fuel cell buses and hydrogen refueling stations in November 2023. 2nd batches of trials are coming this year, and even more trial projects are expected to be commenced shortly in support of the strategy for developing hydrogen in HKC. 2. Upon the success of district cooling in Kai Tak district, HKC commenced 2 new DCS projects. HKC will incorporate DCS in other new development areas and enhance the efficiency of existing DCSs. 3. EV - in 2021, HKC announced the ***Hong Kong Roadmap on Popularisation of Electric Vehicles***, with measures such as no new registration of ICE cars in 2035. Tax concessions have been implemented to encourage the adoption of electric private and commercial vehicles. The number of EV registrations increased from 20% in 2021 to 64% in 2023. HKC aimed to introduce 700 electric buses and 3000 taxis by the end of 2027. 4. The Office of Climate Change and Carbon Neutrality was established in 2023 for taking forward and coordinating strategies, policies and action plans in combating climate change.
Indonesia	1. There are 21 projects for green hydrogen. Preparing a hydrogen roadmap to 2060. 2. Starting to collect data on EVs from this year, 2024. 3. There is no data on off-grid generation yet. 4. No information about DCS in INA. 5. Regarding end-use survey, the Central statistics agency is in charge, but there are manpower and budget problems.
Malaysia	1. No hydrogen production yet, but two projects will start in 2027. The capacity of hydrogen production will be about 2.5 million tons by 2050. 2. Ongoing process of collecting data from district cooling companies. 3. No data on battery storage yet but there is a plan of 100MW storage by 2030. 4. Ongoing process of collecting data on EV charging.
The Philippines	1. Updating the energy balance already accounts for electricity consumption of EVs although still expecting an increase in the future. EUMB is tasked with coordinating with the transportation office regarding EVs.

	2. CRESP to regionalize the energy balance table which will start with the household energy consumption survey (HECS). The survey will start in May or June this year for completion by the end of the year. Expanding the questionnaire to include other questions like energy resilience, appliance labelling, acceptability of nuclear power, etc.
Chinese Taipei	1. CT conduct pilot projects for hydrogen utilization using hydrogen reformed from natural gas. 2. Battery storage is being constructed by electricity providers and users.
Thailand	1. End-use survey in the transport sector every 5 years to measure efficiency in the road transport sector. 2. Residential and commercial will be added.

B. Expert groups' collaboration

Another key highlight of the meeting was the discussion of collaboration between expert groups, EGEDA, EGEEC, EGNRET and EGCFE. To start the discussion, Ms Reiko Eda, EGCFE Chair, presented the key points of the G7 Hiroshima Communique in May 2023 such as energy security and clean energy transition, energy efficiency, renewable energy, low carbon and renewable hydrogen, natural gas and LNG, and critical minerals. She mentioned that the EGCFE would happily collaborate on most of these key points with the three working groups.

In the past, collaboration existed between expert groups, such as EGEEC/EGNRET, EGEDA/EGEEC, EGEDA/EGNRET joint meetings and the EGEDA/EGNRET/EGCFE joint workshops. In the future, the expert groups hope to conduct a joint meeting of all four expert groups. Hong Kong, China is honoured to have the privilege to host that first-ever joint meeting in Spring 2025.

The EGEEC secretariat mentioned having a joint workshop with EGNRET and a regular joint meeting with EGNRET. This was very important for members to assess the gap between the energy supply and demand sides. EGEEC also suggested collaboration on energy storage technologies, which play a crucial role in integrating renewable energy and optimizing the use of clean fossil energy. EGEEC will have a joint meeting with EGCFE in May and will be jointly organising the APEC project on energy efficiency enhancement in electricity generation. EGEEC expressed appreciation to EGEDA for preparing the EEI template and encouraged members to fill out the template. EGEEC also shared its previous engagement with the APEC Land Expert Group (LEG) and learnt that sufficient charging facilities and a stable grid through efficient energy storage are crucial for Electric Vehicles adoption.

EGNRET would also continue collaborating with other working groups on building capacities in adopting the use of NRE. They would also explore collaboration with EGEEC for a workshop on the use of green hydrogen for power generation.

EGEDA is happy to collaborate with all the expert groups, and maybe expand collaboration with the members to talk about their experiences in collecting new energy products and technologies, especially hydrogen.

❖ **Session 9: Other business**

The following were discussed:

A. Upcoming events

EWG67 will be held in Peru in February 2024. The EWG68 will also be held in Peru in August alongside the EMM and SOME meetings.

The joint EGCFE-EGEEC meeting will be held in Nanjing, China in May 2024. The EGNRET60 will be held in April 2024 along with a joint workshop with EGCFE. Both EGEEC and EGNRET are still looking for volunteer economies to host their meetings in the second half of 2024.

The IEA will hold its ministerial meeting in conjunction with its 50th anniversary on 13-14 February 2024. IEA online training on energy statistics will also be held in the first half and the second half of 2024.

IRENA will celebrate its 15th year anniversary on 26 January 2024 which coincides with the International Clean Energy Day. There will also be a training to be held in Africa in the first half of 2024 and in Asia-Pacific in the second half.

B. The 22nd APEC workshop on energy statistics

The EGEDA secretariat will hold the 22nd workshop on energy statistics in the second half of July 2024 in Tokyo. The agenda will be built on the four last workshops on renewable energy, end-use energy data collection, and data collection on new energy products and technologies. The objective is to receive updates on improvements in data collection as a result of the last four workshops.

C. Next meeting

The next EGEDA meeting (EGEDA36) will be held jointly with EGCFE, EGEEC and EGNRET in Hong Kong, China in spring 2025.