

## The 55<sup>th</sup> Meeting of APEC Expert Group on New and Renewable Energy Technologies (EGNRET 55)

### EGNRET 55 Meeting Summary

Virtual Meeting hosted by Chinese Taipei

12-14 May 2021

(Chinese Taipei Time, UCT+8)

### 1. Introduction

The Joint Meeting of 55<sup>th</sup> APEC Expert Group on New and Renewable Energy Technologies (EGNRET 55) and 56<sup>th</sup> Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEEC 56) was held in virtual style by Chinese Taipei from 12 to 14 May 2021.

The Joint Meeting of EGNRET 55 and EGEEC 56 was held from 09:00 am – 12:00 pm on 13 May 2021 and from 11:30 am to 12:15 pm on 14 May 2021. The EGNRET 55 meeting was held from 09:00 am to 11:30 pm on 14 May 2021.

As for the joint meeting, delegates from 8 APEC member economies (Australia; China; Hong Kong, China; Indonesia; Japan; Chinese Taipei; Thailand and the United States), and representatives from 6 APEC fora, including APEC Secretariat, Energy Working Group (EWG), Expert Group on Energy Data and Analysis (EGEDA), Expert Group on Energy Efficiency and Conservation (EGEE&C), Asia Pacific Energy Research Centre (APEREC), and APEC Sustainable Energy Center (APSEC) attended the meeting. In addition, representatives from 2 international organizations, the International Energy Agency (IEA) and the International Copper Association (ICA), participated in the Joint Meeting as observers and guest speakers.

As for the EGNRET 55 meeting, representatives from 8 APEC member economies (Canada; China; Hong Kong, China; Japan; Republic of Korea;

Chinese Taipei; Thailand and the United States) as well as one invited speaker from Climate Investment Funds of World Bank attended the meeting.

The list of EGNRET 55 and Joint Meeting participants was attached in Annex A of the meeting summary.

## **2. Joint Meeting of EGNRET 55 and EGEEC 56 (09:00 am–12:00 pm on 13 May 2021)**

The Joint Meeting was co-chaired by Dr. Tom H.T. Lee, Chair of EGNRET, and Mr. Vy Ek-chin, Chair of EGEE&C.

### **2.1 Official Welcome**

On behalf of the host economy, Mr. Chun-li Lee, Deputy Director-General, Bureau of Energy, Ministry of Economic Affairs of Chinese Taipei made the opening remarks and highlighted Chinese Taipei's energy transition progress and prospect, including developing renewable energy, enhancing energy conservation and improving energy efficiency.

### **2.2 Opening Addresses and Adoption of Joint Meeting Agenda**

Dr. Tom H.T. Lee, Chair of EGNRET, in the opening remarks emphasized the need for collaborative works in achieving the two APEC aspirational goals, namely the renewable energy doubling goal and energy intensity reduction goal. EGNRET and EGEE&C organized this joint meeting to facilitate active participation and to discuss key areas of collaboration. He appreciated Chinese Taipei for the hospitality in hosting the meeting and welcomed the delegates from APEC member economies, APEC fora and the two international organizations, IEA and ICA. The joint meeting agenda was adopted by participating member economies.

### **2.3 Energy Development in Chinese Taipei**

Dr. Chung-Hsien Chen, Director of Energy Technology Division, Bureau of Energy, Ministry of Economic Affairs, Chinese Taipei, presented the Energy Development in Chinese Taipei, including the energy situation, energy transition policies, the development of renewable energy as well as energy efficiency and conservation. Chinese Taipei also indicated its planning on achieving net zero emissions by 2050 as well as implementation of a variety of policies to achieve energy transition, and would look forward to enhancing cooperation with APEC member economies.

### **2.4 Updates of APEC/ APEC Fora**

#### **(1) APEC Secretariat Update by Mr. Tetsuya Shimokawa, Program Director, APEC Secretariat**

APEC Secretariat presented the overall outcomes of APEC projects for 2021. The approval rate of APEC funded projects in Session 1, 2020 was 56% with 4 EWG projects were approved by BMC. In 2020 Session 2, the approval rate of APEC funded project was 66% with 11 EWG projects in the QA process.

The APEC project cycle for 2021 Session 1 including important dates and updated information as well as for 2021 Session 2 including advice for project implementation in organizing workshops and APEC procurement rules were reported. APEC Secretariat also introduced the “PO Toolkit” and “Project Quality: Training and Guidance.”

#### **(2) EWG Update by Ms. Ariadne BenAissa, Acting EWG Lead Shepherd**

The Acting EWG Lead Shepherd firstly reported that the EWG Lead Shepherd selection would be held in EWG 61 on 21-25 June 2021 hosted by Brunei Darussalam. In addition, the Acting EWG Lead Shepherd introduced the workshop “Energy Transition Efforts in the Asia-Pacific

Region” held alongside EWG 61 and the policy discussion on “Incentives and tools for accelerating the development of low emissions energy” proposed by New Zealand. The changes to the eligibility criteria for “the Energy Efficiency and Low Carbon Measures Sub-fund” was also reported. The Acting EWG Lead Shepherd further reminded that the EWG Terms of Reference and the APEC Energy Security Initiative would be discussed in the EWG 61 meeting.

**(3) EGNRET Update by Dr. Tarcy Sih-Ting Jhou, EGNRET Secretariat**

EGNRET Secretariat reported the meeting summary of the 54<sup>th</sup> meeting of APEC EGNRET hosted by the Philippines on 10-11 November 2020. The EGNRET Secretariat also presented the outcomes of the Chair and Vice-chair selection for the 2021-2022 term, and reported the EGNRET project updates and EGNRET recent workshops.

**(4) EGEE&C Update by Ms. Jovian Cheung, EGEE&C Secretariat**

EGEE&C secretariat presented the meeting summary of the 55<sup>th</sup> meeting of APEC EGEE&C and the associated workshops hosted by Hong Kong, China on 17-20 November 2021. The EGEE&C secretariat also reported the EGEE&C project updates.

**(5) EGEDA Update by Mr. Edito Barcelona, EGEDA Secretariat**

EGEDA secretariat reported EGEDA activity updates, including energy data collection, training courses and workshops on energy statistics, last and upcoming EGEDA meetings. The tracking progress of the data on the APEC energy intensity reduction goal and APEC renewable energy doubling goal were also presented.

**(6) APERC Update by Mr. Glen Sweetnam, Senior Vice President, APERC**

APEREC presented the update on APEC Energy Demand and Supply Outlook, 8<sup>th</sup> Edition, including the two scenarios – Reference Scenario, and Net-zero Scenario. The 8<sup>th</sup> Outlook was scheduled to be published in the 2<sup>nd</sup> quarter of 2022. APEREC further presented the preliminary results for energy intensity trend and breakdown for 4 economies (China, US, Japan and Russia).

**(7) APSEC Update by Dr. Jinlong Ma, Vice President, APSEC**

APSEC reported its activity and project updates relating to ETS pillar program, and CNSC pillar program. APSEC also presented its pathway to upgrade its clean coal technology (CCT) pillar program to clean energy technology (CET) pillar program, and updated on the expansion of CNSC network.

**2.5 International Energy Agency (IEA) Presentation by Ms. Mel Slade, Senior Program Manager, IEA**

IEA shared the achievements of appliance efficiency policy, and further introduced a call to action to strengthen Super-efficient Equipment & Appliance Development (SEAD) initiative launched by the UK and IEA. IEA presented the savings potential from product efficiency worldwide.

**2.6 International Copper Association (ICA) Presentation by Mr. Pierre Cazelles, Director – Global Partnerships, ICA**

ICA shared their programs to support the development of enabling regulatory and policy for higher efficiency electricity-using products as well as decentralized renewable energy systems. ICA also introduced their new initiative – Cornerstone of Rural Electrification (CORE) and support for APEC economies including technical expertise, managerial support to implement the project and conduct the studies and financial support.

**2.7 Key Areas for Collaboration by Dr. Tarcy Sih-Ting Jhou, EGNRET**

## Secretariat

EGNRET Secretariat introduced the key areas for possible collaborations between EGNRET and EGEE&C in the future, including holding joint meetings as well as EE and RE projects and workshops. EGNRET and EGEE&C members were expected to further discuss these areas in their meetings, and were encouraged to propose new areas.

### **3. EGNRET 55 Meeting (09:00 am - 11:30 am on 14 May 2021)**

#### **3.1 Opening Address and Adoption of EGNRET 55 Agenda**

Dr. Tom H.T. Lee, Chair of EGNRET, chaired the EGNRET 55 meeting and welcomed the delegates from APEC member economies, APEC sub fora and a guest speak from Climate Investment Funds. The EGNRET 55 meeting was adopted by the participating member economies.

#### **3.2 World Bank's Global Energy Storage Program (GESP) by Mr. Daniel Morris, CTF/SREP Coordinator, Climate Investment Funds (CIF)**

Mr. Daniel Morris delivered a brief introduction of Global Energy Storage Program (GESP), which was a new program of the World Bank's Climate Investment Funds activity aiming to deliver breakthrough energy storage solutions at scale in developing countries. Mr. Daniel Morris agreed to share his contact information on the slides that would be later published on the EGNRET website. EGNRET members were encouraged to learn more details about the program.

#### **3.3 Progress/Status of Current EGNRET Projects & Project Submission Process by Ms. Han-Yun Lee, EGNRET Secretariat**

EGNRET Secretariat reported the project submission process including the concept note stage and the proposal stage for Session 2, 2021, and updated the status of EGNRET projects. As of May 2021, EGNRET has 4 concept notes,

5 project proposals, and 14 projects in implementation. The list of EGNRET project updates (as of May 2021) was attached in Annex B of the meeting summary.

### 3.4 EGNRET Projects Report

11 projects were presented by four member economies, namely China, Chinese Taipei, Thailand, and the United States as listed in the table below.

Project Title		Project No.	Status (as of May 2021)	Proposing Economy
1	Innovative Approaches for Scaling-Up Renewable Energy Deployment in APEC Region	EWG 04 2020S	On-Going	China
2	Empowering Indigenous Social Awareness on Renewable Energy and Increasing Inclusion Sustainability for Green Recovery in APEC Regions	-	CN	Chinese Taipei
3	Utilizing renewable energy certification to facilitate APEC regional renewable energy growth	EWG 10 2020A	QA Process	
4	Achieving Carbon Neutrality through Bio-Circular-Green Economy Principle	-	CN	Thailand
5	Integrating electrical vehicles and solar rooftop PV in electricity distribution systems with continued performance of distribution transformers	EWG 03 2020A	On-Going	
6	Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region	EWG 04 2019A	On-Going	
7	Accommodating Disruptive	EWG 11	On-Going	

	Technology into RE&EE Policies for Energy Security	2019A		
8	Lessons learned on resiliency and uptake of variable energy resources from islanded grids that support APEC clean energy goals	-	CN	USA
9	APEC Clean Energy Purchasing and Decarbonization Workshop	EWG 03 2021S	On-Going	
10	The Role of Integrated Distribution System Planning in Maximizing the Use of Distributed Energy Resources and Resiliency in the APEC Region	EWG 03 2020S	On-Going	
11	APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy	EWG 06 2019A	On-Going	

### **3.4.1 Innovative Approaches for Scaling-Up Renewable Energy Deployment in APEC Region (EWG 04 2020S / China)**

The project focused on RE power generation and aimed to explore innovative approaches for scaling-up RE application in APEC region, which facilitated achieving the APEC RE goal. Through review, investigation and stakeholder consultation, the project would assess the barriers and drives for RE development as well as the RE development from performance of energy system, sustainability and energy access perspectives. Suggestions and recommendations on innovative approaches would be put forward through analysis of policy, technologies, business environment, case study, etc. Research results would be synthesized in project report and shared. Presentations on the findings would be made in EGs' meeting and APSEC's events for members to exchange experience and disseminate relevant know-

how

### **3.4.2 Empowering Indigenous Social Awareness on Renewable Energy and Increasing Inclusion Sustainability for Green Recovery in APEC Regions (CN for Session 2, 2021 / Chinese Taipei)**

The project aimed to promote indigenous social awareness on renewable energy and increase inclusion sustainability for green recovery in APEC regions. The objectives of this project were to 1) empower the indigenous on social awareness of renewable energy technologies by developing the knowledge, ability, skill and technical know-how to accelerate the development of green energy technologies, 2) conduct training course on physical-virtual hybrid learning modules, green farm on-site learning and basic STI skill empowering, and 3) conduct a 3-day event of policy dialogue, workshop and culture fashion show for collaboration and international exchange to other APEC member economies.

### **3.4.3 Utilizing renewable energy certification to facilitate APEC regional renewable energy growth (EWG 10 2020A / Chinese Taipei)**

The project aimed to bring to the attention of APEC economies the growing importance of renewable energy certification (REC) and equip them with know-how of developing renewable energy certification systems. It was initially expected that questionnaires would be distributed and a workshop would be held in 2021; however, the project, proposed in 2020, was postponed due to the assessment process.

### **3.4.4 Achieving Carbon Neutrality through Bio-Circular-Green Economy Principle (CN for Session 2, 2021 / Thailand)**

The project aimed to extract lesson learned, best practices and low-carbon technology foresight from those economies with established carbon neutral policy, through documentation studies and interactive workshop, to help accelerate carbon neutral policy dialogue in the rest of economies, which would

altogether help achieve APEC RE&EE goals, as well as APEC contribution to global climate action. The project was seeking cooperation from the APEC members to support this project by being co-sponsoring economies.

#### **3.4.5 Integrating electrical vehicles and solar rooftop PV in electricity distribution systems with continued performance of distribution transformers (EWG 03 2020A / Thailand)**

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 build the capacity of APEC economies' utilities and policy-makers to 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 consultants for this project were being selected and study would start afterwards.

#### **3.4.6 Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region (EWG 04 2019A / Thailand)**

The project addressed the co-benefitting opportunities for RE & EE project for power generation and distribution, transportation, and buildings sector so that cost can be shared to promote project with both RE & EE benefits. It would focus on sharing of best practices with the development of criteria, framework and guideline of the joint project evaluation in the future. In addition, capacity building activities for project developer/ stakeholders will be on project designing and planning for transportation sector.

The first workshop was organized on 18-19 March 2021 in virtual-hybrid format with 82 participants from 13 APEC member economies. Key success factors were extracted from successful RE & EE projects & policy criteria in APEC. Technical criteria for RE & EE co-benefit was proposed through Eligibility-

Priority-Scoring APEC proposal evaluation. A second workshop was planned in July 2021 for capacity building in RE & EE project developers.

### **3.4.7 Accommodating Disruptive Technology into RE&EE Policies for Energy Security (EWG 11 2019A / Thailand)**

The project aimed to review the impact of disruptive technologies, share best practices on RE&EE policies to accommodate the disruptive technologies and build capacity on integration of the disruptive technologies for energy security.

A virtual workshop was organized on 29-30 April 2021 with 98 participants from 13 APEC member economies to share best practices on disruptive technology supporting RE & EE policies and brainstormed on RE & EE policies for the smooth integration of disruptive technologies. The final report with policy recommendation on accommodating disruptive tech on RE&EE policies was being drafted for submission before October 2021.

### **3.4.8 Lessons learned on resiliency and uptake of variable energy resources from islanded grids that support APEC clean energy goals (CN for Session 1, 2021 / USA)**

The objective of this project was to provide a summary of the costs and operational experiences of providing reliable electricity while utilizing maximum variable energy resources from islanded grids in the APEC region. As APEC economies strived towards meeting aggressive clean energy goals, including some looking at the potential to obtain net-zero carbon energy related emissions in the 2050 timeframe, important lessons could be learned on resiliency and the capability to significantly increase the uptake of variable energy resources (VER) from islanded grids. This study would benefit both developing member economies who are expanding energy access in island communities and developed member economies moving towards new clean energy goals.

### **3.4.9 APEC Clean Energy Purchasing and Decarbonization Workshop (EWG 03 2021S / USA)**

The objective of this project was to hold two workshops to develop a toolkit that policies governments could use to drive decarbonization of electricity systems while simultaneously expanding the electricity infrastructure in an affordable and sustainably way. The project was approved on 5 May 2021, and would start afterwards.

### **3.4.10 The Role of Integrated Distribution System Planning in Maximizing the Use of Distributed Energy Resources and Resiliency in the APEC Region (EWG 03 2020S / USA)**

The project concentrated on six themes, 1) transparent distribution system planning regulation and architecture, 2) planning for electric vehicles and their potential, 3) leveraging distributed energy resource for reliability and resilience, 4) increasing situational awareness, 5) allowing for microgrids, and 6) equitable recovering strategies. The draft final report was expected to be completed by June 2021.

### **3.4.11 APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy (EWG 06 2019A / USA)**

The project aimed to promote information sharing and capacity building across APEC universities with three key objectives as follows.

- (1) Build the capacity of workshop participants by developing a network between the EWG, APERC, and University faculty in APEC economies.
- (2) Share examples of collaborative projects by Universities in APEC economies that address the APEC energy efficiency and renewable energy goals.
- (3) Develop project ideas, between the policymakers and University faculty in APEC economies, as project-based courses that will help inform energy

efficiency and renewable energy goals.

A virtual workshop on 8-9 June 2021 was being planned to bring together energy policymakers from APEC economies, faculty from APEC universities, members of APERC, etc. to talk about potential EWG/University collaboration.

### 3.5 Member Economy Presentation: Renewable Energy Updates

The meeting theme of EGNRET 55 meeting was “Renewable Energy Updates.” 5 member economies (Hong Kong, China; Japan; Chinese Taipei; Thailand; the United States). In addition to member economies’ presentations, APERC presented the updates on the renewable energy development as well.

- (1) **Hong Kong, China** reported its latest carbon neutrality target and its renewable energy development progress. The facilitation measures for the development of renewable energy, such as FIT & RE certificate systems, relaxing buildings-related regulations, providing tax incentives on procurement of RE power systems, enhancing public awareness on RE technologies, solar harvest, and green tech fund were also reported.
- (2) **Japan** reported its renewable energy development progress and current target of renewables by 2030. In addition, Japan announced the 2050 carbon neutral declaration and formulated “Green Growth Strategy” in 2020. The current target of renewables is set at 22-24% of total power generation in 2030, which would be likely to revised upward substantially corresponding to the newly declared 46% GHG reduction target by 2030.
- (3) **Chinese Taipei** reported its current renewable energy development progress. Chinese Taipei set a target of 20% renewable energy generation by 2025 with main focuses on the development of solar PV and offshore wind energy. The installed solar PV capacity grew rapidly, reaching 5.9 GW by the end of February 2021, while the offshore wind was expected to grow

steadily with the newly released draft phase 3 policy.

- (4) **Thailand** reported its renewable energy status in 2020 and Bio-Circular-Green (BCG) Economic Model. Due to the COVID-19 pandemic, the share of renewable energy in the final energy consumption slightly dropped to 15.13% in 2020, compared to 16.50% in 2019. In addition, The BCG, a new economic model for inclusive and sustainable growth, would be applied in order to (i) increase domestic GDP to be 4.3 trillion THB within 5 years, (ii) support local economy, and (iii) achieve the Sustainable Development Goals (SDGs).
- (5) **The United States** reported its clean energy announcement made at Leader Summit on Climate in April 2021. New goals such as cutting solar energy price by 60% by 2030, deploying 30 GW offshore wind by 2030, lowering the cost of clean and renewable hydrogen by 80% before 2030, making EVs affordable, and dramatically reducing the costs of industrial and atmospheric carbon capture were introduced. In the meantime, the US private sector, such as Google and Amazon were also setting aggressive carbon neutral targets.
- (6) **APEREC** reported its tracking and assessment on the renewable energy development and sectoral CO<sub>2</sub> emissions from fuel combustion with two scenarios (Reference scenario and Net-zero scenario) in China, Japan, and USA.

### **3.6 Discussion: Key Areas for Collaboration with APEC Expert Groups and other Cross Fora**

EGNRET Secretariat reported the key areas for APEC cross-fora collaborations and introduced examples for joint activities. The collaborative actions listed below were endorsed by the attending economies.

- (1) The EGNRET would continue to work with EGEE&C on co-organizing Joint

Meetings in the future and sharing EE & RE Policy Solutions for the post COVID-19 green recovery;

- (2) The EGNRET members were encouraged to develop EE & RE projects and workshops;
- (3) The EGNRET members were encouraged to submit APEC projects on decarbonization through EE and RE.

### **3.7 Administration and Operation**

#### **3.7.1 Review of EGNRET Terms of Reference (ToR)**

EGNRET ToR was reviewed, and no amendment was made by members.

#### **3.7.2 Coming Events and Next Expert Group meeting**

- (1) EGNRET Chair announced that the upcoming 61<sup>st</sup> Energy Working Group Meeting (EWG 61), hosted by Brunei Darussalam, would be held on 21-25 June 2021 in virtual format.
- (2) The EGNRET 56 meeting will be held next year. EGNRET Secretariat would seek members' views on the dates, format and willingness of hosting the next meeting.
- (3) Thailand expressed the interest in hosting the next EGNRET meeting in physical format and jointly with EGEE&C in 2022, if the pandemic situation allowed.

## **4. Joint Meeting of EGEEC 56 and EGNRET 55 (11:30 am – 12:15 pm on 14 May 2021)**

The Joint Meeting was co-chaired by Dr. Tom H.T. Lee, Chair of EGNRET and Mr. Vy Ek-chin, Chair of EGEE&C. The joint meeting agenda was adopted by participating member economies.

### **4.1 EGNRET Report and EGEE&C Report**

The EGNRET Secretariat reported the outcome of EGNRET 55, and the EGEE&C Secretariat reported the outcome of EGEEC 56.

## **4.2 Key Areas for Collaboration with APEC Working Groups and Sub-fora**

EGEE&C Chair shared several collaboration opportunities as follows:

- (1) Joint meeting in 2022;
- (2) Energy Efficiency & Renewable Energy projects and workshops;
- (3) Energy Efficiency & Renewable Energy policies for post Covid-19 green recovery

EGEE&C Chair encouraged member economies from both Expert Groups to submit APEC projects on decarbonization through energy efficiency and renewable energy. In addition, EGEE&C and EGNRET members affirmed the possibility of the collaboration areas.

## **4.3 Closing Remarks**

Mr. Chun-li Lee, Deputy Director-General, Bureau of Energy, Ministry of Economic Affairs of Chinese Taipei thanked all delegates for their participation and declared the three-day meeting a success. He mentioned that further actions to increase renewable energy and improve energy efficiency & conservation were needed to mitigate the effects of climate change.

**ANNEX A: LIST OF EGNRET 55 and JOINT MEETING PARTICIPANTS**

No.	Title	Name	Economy/Org.
1	Dr.	Tom, Hom-Ti Lee	EGNRET Chair
2	Mr.	Ek Chin Vy	EGEE&C Chair
3	Dr.	Tzu-Yar Liu	EGNRET Secretariat
4	Dr.	Tarcy Jhou	
5	Ms.	Han-Yun Lee	
6	Dr.	Keng-Tung Wu	
7	Ms.	Jovian Cheung	EGEE&C Secretariat
8	Mr.	WillyYu	
9	Ms.	Ariadne BenAissa	EWG
10	Mr.	Tetsuya Shimokawa	APEC Secretariat
11	Mr.	Nobuhiro Sawamura	EGEDA
12	Mr.	Sawamura Nobuhiro	
13	Mr.	Edito Barcelona	
14	Ms.	Elvira Gelindon	
15	Mr.	Christopher Doleman	APERC
16	Mrs.	Elvira Gelindon	
17	Dr.	Victor Martinez	
18	Mr.	Glen Sweetnam	
19	Mr.	Hugh Marshall-Tate	
20	Dr.	Manuel Heredia	
21	Mr.	Munehisa Yamashiro	
22	Mr.	Zhexing Yan	APSEC
23	Mr.	Steivan Defilla	
24	Prof.	Li Zhu	
25	Dr.	Yong Sun	
26	Mr.	Jinlong Ma	
27	Dr.	Guanyi Yu	
28	Ms.	Wanyi Zhao	IEA
29	Ms.	Mel Slade	
30	Mr.	Pierre Cazelles	ICA

31	Mr.	Daniel F. Morris	CIF
32	Ms.	Cathy McGowan	Australia
33	Ms.	Samantha Griffin	
34	Mr.	Michael Paunescu	Canada
35	Mr.	David E Caughey	
36	Ms.	Zikun Zhao	China
37	Dr.	Shunchao Wang	
38	Mr.	Pengcheng Li	
39	Mr.	Ren Liu	
40	Mr.	Meng Liu	Hong Kong, China
41	Mr.	Arthur Lee	
42	Mr.	Kei Ming, Barry Chu	
43	Mr.	Wai Hung, Leo Cheng	
44	Ms.	Elaine Yip	Indonesia
45	Mr.	Hendro Gunawan	
46	Mr.	Kunaefi	
47	Mrs.	Wahyu Lestari	Japan
48	Ms.	Naoko DOI	
49	Dr.	Yasushi Ninomiya	Korea
50	Dr.	Sung Moon JUNG	
51	Mr.	Chun-Li Lee	Chinese Taipei
52	Dr.	Chung-Hsien Chen	
53	Ms.	Wendy Lin	
54	Ms.	Shu-Mei Peng	
55	Ms.	Shih-Hua Hsu	
56	Mr.	Zheng-Hong Hsu	
57	Mr.	Shih Chun Tai	
58	Dr.	Chen-Yeon Chu	
59	Ms.	Yun-Tzu(Nicole) Guo	
60	Ms.	Ching-Yu Li	
61	Mr.	Henry Lo	
62	Ms.	Nicole Guo	
63	Ms.	Chen-Chun Lin	
64	Mr.	Billy Wen	

65	Mr.	Howard Chen	
66	Mr.	Yang-Guang Liu	
67	Mr.	Kuo-Hsiang Chien	
68	Mr.	Yu-Choung Chang	
69	Ms.	Shao-Hui Kao	
70	Dr.	Kampanart Silva	Thailand
71	Dr.	Nuwong Chollacoop	
72	Dr.	Yaowateera Achawangkul	
73	Mrs.	Munlika Sompranon	
74	Mr.	Wisaruth Meathasit	
75	Mr.	Warote Chaintarawong	
76	Ms.	Sukanya Nanta	USA
77	Dr.	Cary Bloyd	
78	Mr.	Derek Greenauer	

## ANNEX B: LIST OF EGNRET PROJECT UPDATES (As of May 2021)

### A. Concept Notes (4) for Session 2, 2021

No.	Project Title	Proposing Economy
1	Empowering Indigenous Social Awareness on Renewable Energy and Increasing Inclusion Sustainability for Green Recovery in APEC Regions	Chinese Taipei
2	The Legislation Recommendation and Promotion of Multifunctional Ocean Space Usage: Feasibility Analysis of Integrating Floating PV Installations at Offshore Wind Farms in the APEC Region	Chinese Taipei
3	Best Practices on the Energy Storage System in E-scooters Developments and Applications in the APEC Region	Chinese Taipei
4	Achieving Carbon Neutrality through Bio-Circular-Green Economy Principle	Thailand

### B. Proposing Projects (5)

No.	Project Title	Proposing Economy
1	Roadmap for facilitating renewable energy investment in APEC	China
2	Impacts of COVID-19 on renewable energy development in APEC Economies	China
3	Support offshore wind deployment and grid connection in APEC region	China
4	Utilizing renewable energy certification to facilitate APEC regional renewable energy growth	Chinese Taipei
5	Lessons learned on resiliency and uptake of variable energy resources from islanded grids that support APEC clean energy goals	USA

### C. Ongoing Projects – 2018 & 2019 (8)

Project No.	Project Title	Proposing Economy
EWG 10 2018A	Low Emissions Development Strategies: Supporting the transition to energy efficient, electric transport systems	USA
EWG 02 2019A	Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region-Phase 2	Chinese Taipei
EWG 03 2019A	APEC Multi-stakeholder Dialogue on Promoting Renewable and Clean Energy Policies	Viet Nam
EWG 04 2019A	Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region	Thailand
EWG 06 2019A	APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy	USA
EWG 10 2019A	APEC Workshop on Strategies and Successful Case Studies on Solar Energy	Viet Nam
EWG 11 2019A	Accommodating Disruptive Technology into RE&EE Policy for Energy Security	Thailand
EWG 12 2019A	Evaluation of Energy Technologies, Programs and Policies	USA

### D. Ongoing Projects – 2020 (6)

Project No.	Project Title	Proposing Economy
EWG 03 2020A	Integrating electrical vehicles and solar rooftop PV in electricity distribution systems with continued performance of distribution transformers	Thailand
EWG 04 2020A	A community-based waste management to renewable energy workshop	Indonesia

EWG 08 2020A	APEC workshop on promoting renewable energy for rural and remote area development	Viet Nam
EWG 13 2020A	Workshop on Korea's new and renewable energy policies and best practices applying them into the APEC region	Korea
EWG 14 2020A	The promotion of community waste-to-energy system	Chinese Taipei
EWG 04 2020S (Self-funded)	Innovative Approaches for scaling-up renewable energy deployment in APEC Region	China