

APEC EXPERT GROUP ON NEW & RENEWABLE ENERGY TECHNOLOGIES (EGNRET)

52nd Meeting and Associated Meetings

Summary Record

Hong Kong, China

18-22 March 2019

I. Introduction

The 52nd Meeting of the APEC Expert Group on New and Renewable Energy Technology (EGNRET 52), 53rd Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEEC 53) and the Associated Meetings were held in Hong Kong, China on 18th to 22nd March 2019. In addition, three APEC project-related workshops were held alongside the meetings, namely, “APEC Workshop on Energy Efficiency in the Transport Sector - Developing Fuel Economy Regulations,” “APEC Workshop on Aligning Conformity Assessment Efforts for Energy Efficiency Regulations of Motors in the APEC and ASEAN Regions: 1st Stakeholders’ Consultation Workshop” and “APEC Workshop on Supporting Renewable Energy Integration and Energy Efficiency through Effective Regulation”.

II. Joint Meeting between EGNRET and EGEEC

The joint meeting was separated into two parts, one was held in the

morning on 20th March and the other was held in the afternoon on 21st March 2019.

1. First Session of Joint meeting (20th March 2019)

The first session of the joint meeting was chaired by Dr. Tom H.T. Lee, the Chair of EGNRET, Dr. Pengcheng Li, the Chair of EGEEC and co-chaired by Mr. Hon-Chung, Harry Lai, Deputy Director/Regulatory Services, Electrical and Mechanical Services Department (EMSD), Government of the Hong Kong Special Administrative Region. Attending APEC member delegates were from Chile, People's Republic of China, Hong Kong, China, Indonesia, Japan, the Philippines, Singapore, Chinese Taipei, Thailand, United States, and Viet Nam. In addition, representatives from APEC fora including Asia Pacific Energy Research Centre (APEREC), APEC Sustainable Energy Center (APSEC), Expert Group on Energy Data and Analysis (EGEDA) and Low Carbon Model Town Task Force (LCMT-TF) and non-APEC organization, the International Copper Association Ltd. (ICA) were invited to participate in the meeting.

Dr. Lee, EGNRET Chair, and Dr. Li, EGEEC Chair, welcomed the delegates and opened the meeting. On behalf of both groups, Dr. Lee expressed the sincere appreciation to the host economy, Hong Kong, China for the excellent support in organizing and hosting the meetings. Mr. Alfred SIT, Director of Electrical and Mechanical Services, the Government of the Hong Kong Special Administrative Region, on behalf of the host economy, Hong Kong, China, gave an official welcome to the delegates and introduced energy situation, energy plan and strategies in Hong

Kong, China. He also briefed the renewable energy and energy efficiency development and achievement. Then, Mr. VY Ek Chin, Assistant Director/Electricity and Energy Efficiency of the EMSD, Hong Kong, China gave a speech that covered energy supply and demand, overview of the development of energy conservation and renewable energy in Hong Kong, China. Hong Kong, China has dedicated to improving energy efficiency since 1995, and the energy intensity has decreased these two decades even the GDP has doubled. Furthermore, Hong Kong, China has implemented the Feed-in Tariff and renewable certificate schemes to promote renewable energy deployment.

(1) Updates of APEC/ APEC EWG/ EGs /APEC Centers

Five presentations in the joint meeting as below:

a) “APEC Secretariat Report”

This presentation was prepared by Mr. Tetsuya SHIMOKAWA, the Program Director, APEC Secretariat and presented by Dr. Tarcy Sih-Ting Jhou, EGNRET Secretariat on behalf of Mr. SHIMOKAWA in the joint meeting. The presentation covered the introduction of theme of APEC Chile 2019 “Connecting People, Building the Future” and the latest version of APEC Project Guidebook (Ed. 13), the process and deadline of APEC project submission for Session 1 and 2 in 2019, and the key advice to project implementation such as hosting APEC workshop and submitting reports.

b) “Updates Development of APEC Energy Working Group”

This presentation was presented by Dr. Liu Ren, EGEEC Secretariat on behalf of EWG Secretariat. The presentation introduced recent EWG decisions on APEC project management, outreach within and beyond APEC, EWG Strategic Plan (2019-2023), 2019 EWG Work Plan and APEC Energy Vision Post 2020. EWG Secretariat also reported the APEC EWG website has been updated to add one function to share the APEC reports and publication and 2-page project summary will be uploaded on the website as well.

c) “Update of APEC EGEEC”

Dr. Liu Ren, EGEEC Secretariat, introduced the missions of APEC EGEEC and the outcome of the 52nd meeting of APEC EGEEC. In addition, he briefed the EGEEC current projects and new Concept Note and informed that EGEEC was going to have a chair election in the 53rd meeting.

d) “EGNRET Updates”

Dr. Tarcy Sih-Ting Jhou, EGNRET Secretariat presented the meeting summary of the 51st EGNRET meeting, the status of current EGNRET projects, the election result of EGNRET Chair and Vice Chair for the term 2019-2020 and the revised Terms of Reference which was endorsed at EWG 56 meeting.

e) “Progress toward APEC Goals”

The Chair of EGEDA, Mr. James Kendell, reported the progress on energy intensity reduction goal and renewable energy doubling goal development of APEC according to the latest data in 2016. He also shared the final modeling results from the draft version of APEC Energy Demand and Supply Outlook 7th edition and the decomposition of energy consumption. Mr. Kendell mentioned in accordance with the result from the draft Outlook, the APEC energy intensity reduction goal could be met in 2029 in Business as Usual Scenario. For renewable share doubling goal, a comprehensive renewable share doubling roadmap needs to include policy formulation to overcome the barriers.

f) “Overview of APERC Activities”

Mr. Alexey Kablinskiy on behalf of APERC introduced the APERC’s recent activities including research, training courses, cooperative projects, latest publication and the updates of APEC Peer Review on Energy Efficiency, APEC Low-Carbon Model Town (LCMT) and Peer Review on Low Carbon Energy Policies (PRLCE).

g) “APSEC Activity Updates”

Mr. Steivan Defilla, President Assistant, APSEC presented the background of APSEC and its mission. He also reported the progress of sustainable urbanization project and introduced the 5th Asia-

Pacific Sustainable Energy Development Forum will be held on 18-20 September 2019 in Tianjin, China. The Two self-funded projects namely “Exchange and Training on Clean Coal Technology and Clean Energy Policy” and “Cloud-based Sharing Platform on Multi-energy Microgrid” were also introduced.

2. Second Session of Joint meeting (21st March, 2019)

Mr. VY Ek Chin from Hong Kong, China was elected as the new Chair of EGEEC in the EGEEC 53rd meeting. Mr. VY Ek Chin introduced the new EGEEC Secretariat and co-chaired the second session of the joint meeting with Dr. Lee, EGNRET Chair.

(1) EGEEC meeting Outcome

EGEEC Secretariat, Ms. Jovian Cheung presented the EGEEC 53rd meeting outcomes. Nine APEC economies participated in the EGEEC meeting, and ten project updates and three new concept notes were reported in the EGEEC meeting. She also introduced the election results of EGEEC Chair.

(2) EGNRET Meeting Outcome

EGNRET Secretariat, Dr. Tarcy Sih-Ting Jhou reported the EGNRET meeting outcomes. She introduced that there were ten economies and four APEC fora including APERC, ASPEC, EGEDA and LCMT to attend the EGNRET 52nd meeting. The results of discussion about the

cross fora cooperation and main challenges of renewable energy development were also presented.

(3) Discussion- Key Areas for Collaborative Actions between EGEEC and EGNRET

Suggestions for the collaborative topics between EGEEC and EGNRET are listed as follows:

- Electric mobility could be a joint area for collaboration as sustainable transport was one of the three challenges raised in Chile's Energy Modernization Paper. However, the scope of the work needs to be more specific. EGNRET Chair, Dr. Lee, reminded that electric mobility is also related to the Transportation Working Group.
- APSEC proposed that sustainability city could be a topic for cooperation between energy efficiency and renewable energy. Delegates suggested APSEC to clarify the definition and scope of sustainability city and share this information in the EWG meeting to expand the collaboration with more expert groups / task-force.
- Both expert groups may consider to have joint meeting with other expert groups/task force in the future. Delegates suggested that EGEEC and EGNRET should have focus or specific topic before having joint meeting with other expert groups.

- Delegates also suggested that energy regulatory, transmission operator, business model, technical barrier and building sector, the target of doubling renewable energy and energy intensity could be the topics to link both expert groups.

At the end of the joint meeting, Mr. Vy, new EGEEC Chair and Dr. Lee, EGNRET Chair, thanked member economies and participants from APEC fora for their suggestions and welcomed member economies to continue to explore areas for collaboration between these two expert groups. The co-chair, Mr. Harry Lai made the closing remarks for the joint meetings. EGNRET and EGEEC delegates thanked Hong Kong, China, for hosting the meetings and their warm hospitality.

III. EGNRET Meeting

1. EGNRET Pre-meeting (18th March 2019)

The EGNRET pre-meeting was held on 18th March 2019. Dr. Lee, EGNRET Chair, welcomed the delegates and opened the meeting after the agenda was adopted.

(1) Project Submission Training Course

Mr. Tetsuya Shimokawa, Program Director, APEC secretariat was not able to attend the meeting, but he prepared a presentation to ask EGNRET Secretariat report on behalf of him. This presentation included the submission process of APEC projects session 1 and 2 in 2019, and the deadline for the submission of concept note and project proposal. Also, this presentation introduced the latest edition of guidebook on APEC Projects, APEC procurement rules and the changes for the APEC publication procedures.

(2) Arrangement for Future EGNRET Meeting

EGNRET Secretariat provided a historical review of meeting themes and meeting locations in last decade as the background information for delegates' discussion on the arrangement for future EGNRET meetings.

The discussion is summarized as below:

- Hold joint meeting to encourage more economies' participation.
- The possible meeting themes in the future include challenges and strategies to promote renewable energy, geothermal

development, financial mechanism, IoT enabled energy technology, etc.

- Circulate the meeting theme one month before the EGNRET meeting for suggestions and comments from member economies.

Dr. Lee, EGNRET Chair, thanked delegates to contribute ideas and suggestions for improving future EGNRET meeting arrangement and will ask EGNRET Secretariat to organize future meetings based on the suggestions.

(3) Progress of Renewable Energy Development

The delegates from Hong Kong, China, Indonesia, Japan, the Philippines, Singapore, Chinese Taipei, Thailand, USA and Viet Nam shared their progress of renewable energy development. Each economy has different challenges on promoting renewable energy including cost, lack of infrastructure, social acceptance, grid connection, etc. In addition, the strategies include financial incentives, FiT, auction system, streamlining of administrative process, green finance certification, etc.

(4) Renewable Energy Information Collection

In responding to the conclusion of EWG 56 meeting, EGNRET is requested to collect the renewable data of all the members and report to the EWG to see if there is any difficulty on data collection, EGNRET Secretariat made a presentation to list which renewable energy data and information we may need to collect, and also raised discussion topics

regarding data collection and cooperation.

Since EGEDA has been collecting the renewable energy data and it is available on the EGEDA website, all delegates agreed that EGNRET will continue to cooperate with EGEDA but not duplicate the effort to collect the data. Regarding the doubling goal of renewable share project, the policy information needs additional effort to collect, and the “APEC Energy Overview” published by APREC is an important reference.

2. EGNRET meeting (20th and 21st March 2019)

Dr. Lee, EGNRET Chair, welcomed the delegates and opened the meeting after the agenda was adopted. The co-chair was Mr. Harry Lai, Deputy Director/Regulatory Services, of the EMSD. Mr. Harry Lai on behalf of the host economy, Hong Kong, China, gave an official welcome to the delegates

(1) Invited Presentations

Four invited presentations presented in the EGNRET meeting are listed below.

- a) “APEC Energy Demand and Supply Outlook to 2050: APEC Target Scenario” by Dr. Nguyen Linh Dan, APERC

The presentation introduced the results based on the draft version of APEC Energy Demand and Supply Outlook 7th edition that covered the scenarios and renewables modelling, the forecast of energy

demand in target scenario, and the renewable energy supply and its potential.

- b) “APSEC Research Results sharing: Research on Integrated Multi-energy System to Enhance Technological Progress of Renewable Energy Deployment in APEC Region” by Dr. Yong Sun, APSEC
- The presentation introduced the APSEC research results including the APEC fund project “Study on the Cost-Effective Renewable Energy-Supply Solutions based on Innovative Solar Technologies to Promote Green Buildings in APEC Region” and a self-funded project “Research on Integrated Multi-energy System to Improve Energy Efficiency and Enhance Technological Progress of Renewable Energy in APEC Region.”

About the research of the integrated multi-energy system, EGNRET delegates suggested APSEC to clarify the definition for the multi-energy system. Furthermore, the proposed multi-energy system includes not only renewable energy but nuclear and fossil fuel energy, delegates suggested APSEC to consider to share this research in the EWG meeting to have a broader discussion.

- c) “Progress of the APEC Low-Carbon Model Town (LCMT) Project” by Mr. Tomonori Kawamura, Deputy Director, International Affairs Office, Agency for Natural Resources and Energy, METI, Japan

Mr. Kawamura presented the LCMT background and its project updates including the dissemination phase 1 to 3 of LCMT project and reported the results of the 2nd LCMT symposium held in September 2018 in Da Nang, Viet Nam.

- d) “Waste-to-Energy in Hong Kong, China” by Dr. Samuel CHUI, Assistant Director of Environmental Protection Department, Hong Kong, China

Dr. Chui presented the blueprint for sustainable use of resource 2013-2022 in Hong Kong, China and a sustainable approach of sludge disposal and T Park. He also introduced the current status of food waste treatment, the design for the waste-to-energy facilities and organic resources recovery centers in Hong Kong, China.

(2) Progress/ Status of Current EGNRET Projects

The EGNRET has a variety of projects underway to facilitate the use of renewable energy technologies in the APEC region. Currently, 3 proposing projects (session 1, 2019) and 7 on-going projects and 5 self-funded projects which are listed below.

A. On-going projects (7 projects)

APEC-Funded Project Title		Proposed Economy	Project Number
1	APEC Workshop on Best Practices for Attracting Renewable Energy Financing and Investment	USA	EWG 04 2018A

APEC-Funded Project Title		Proposed Economy	Project Number
2	Low Emissions Development Strategies: Supporting the transition to energy efficient, electric transport systems	USA	EWG 10 2018A
3	APEC Workshop on Public-Private Partnership for Solar Energy Development	Viet Nam	EWG 12 2018A
4	Empowering a Distributed Energy Resource Future through Regulatory and Market Reforms	Thailand	EWG 11 2017A
5	Economic and Life Cycle Analysis of Solar Photovoltaic Systems in APEC Region toward Low-Carbon Society	Malaysia	EWG 06 2017A
6	Integrated energy system planning for equitable access to sustainable energy for remote communities in the northern regions of North Sulawesi	Australia	EWG 13 2017A
7	Off Grid Electrification Option for Remote Regions in APEC Economies	China	EWG 07 2016A

B. Self-funded projects (5 projects)

Self-Funded Project Title		Proposed Economy	Project Number
1	APEC Workshop on Quality Electric Power Infrastructure focusing on Waste to Energy	Japan	EWG 13 2018S
2	Ethanol's Role in APEC Energy Access	USA	EWG 02 2018S
3	APEC Regional Study on Renewable Energy Financing and Investment for Grid-Connected Wind and Solar	USA	EWG 04 2018S
4	APEC/NARUC Workshop on Supporting Renewable Energy Integration and Energy Efficiency through Effective Regulation	USA	EWG 05 2018S

Self-Funded Project Title		Proposed Economy	Project Number
5	Research on Integrated Multi-energy System to Improve Energy Efficiency and Enhance Technological Progress of Renewable Energy in APEC Region	China	EWG 10 2018S

C. Proposing Projects for S1, 2019

Project Title		Proposed Economy
1	APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy	USA
2	Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region	Thailand
3	Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region-Phase 2	Chinese Taipei

(3) EGNRET Projects Report

Japan delegate, Mr. Takao Ikeda, introduced a Japan self-funded project “APEC Workshop on Quality Electric Power Infrastructure Focusing on Waste to Energy” (EWG 09 2018S). The workshop was held on 21-22 January, 2019 in Tokyo, Japan. The participants and speakers were from Indonesia, Malaysia, the Philippines, Thailand, Viet Nam, APERC and also from various organizations in Japan.

The key objectives of the project are providing vital information on

“APEC Guideline for Quality Electric Power infrastructure”, specific information on waste to energy and sharing experiences on requirements for introducing Waste to energy plants in municipalities.

Thailand delegate, Mrs. Munlika Sompranon, reported one on-going APEC project “Empowering a Distributed Energy Resource Future through Regulatory and Market Reforms” (EWG 11 2017A) and one proposing project “Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Project in the APEC Region.”

Mrs. Sompranon reported that the project "Empowering a Distributed Energy Resource Future through Regulatory and Market Reforms" has not been implemented because the Project Overseer can't accept the work plan submitted by the contractor. Ms. Sompranon is asking APEC Secretariat’s assistance now.

U.S. delegate, Dr. Cary Bloyd, introduced 3 APEC funded projects proposed by U.S., namely, “Low Emissions Development Strategies: Supporting the transition to energy efficient, electric transport systems” (EWG 10 2018A), “APEC Workshop on Best Practices for Attracting Renewable Energy Financing and Investment” (EWG 04 2018A) and “Trainings in Renewable Energy Best-Practices: Procurement, Contracts, Lifecycle Cost Analyses, and Risk Mitigation to Mobilize Private Investment” (EWG 02 2017A), and he reported 3 self-funded projects,

“APEC/NARUC Workshop on Supporting Renewable Energy Integration and Energy Efficiency through Effective Regulation” (EWG 15 2018S), “APEC Regional Study on Financing and Investment for Grid-Connected Wind and Solar” (EWG 04 2018S) and “Ethanol’s Role in APEC Energy Access.”(EWG 02 2018S).

(4) Member Economy Presentations: Waste to Energy in Urbanized Cities

The EGNRET 52nd meeting has set “Waste to Energy in Urbanized Cities” as the meeting theme. Member economies, Hong Kong, China, Indonesia, Japan, the Philippines, Singapore, Chinese Taipei, Thailand and USA introduced their plans, related regulations, incentives and developing projects for waste to energy. In addition, as Chile is the host economy of APEC 2019, Chile’s delegate presented “Sustainable Energy Initiatives: Chile” which 3 APEC workshops will be held in Chile this year, namely, “Distributed Energy Resources Regulation and Rate Design”, “Technological Challenges and Opportunities to Supply Flexibility to Electric Systems” and “Lessons Learned from Promotion Mechanisms Focused on Boosting Energy Solutions in Remote Areas”. Vietnam delegate reported the renewable energy target, its support policies and the main challenges and opportunities for developing renewable energy.

All EGNRET 52nd meeting presentations are available on EGNRET website at:

<https://www.egnret.ewg.apec.org/EGNRET52>

(5) Discussion

- A. Topic 1: The Suggestions of cross fora / non-APEC organizations cooperation regarding Achieving Doubling Renewable Energy Goal

EGNRET Secretariat reported the instruction from EWG 56 meeting, “APEREC, EGNRET and EGADA are encouraged to work together to seek potential ways to achieve the Renewable Energy Doubling Goal” and “EGNRET is requested to seek opportunities of cooperation with IRENA for seeking synergy in the aspect of the Renewable Energy Doubling Goal.”

In response to EWG’s request, EGNRET will keep cooperating with APEC fora including APERC and EGEDA. APERC will publish the latest version of APEC Energy Demand and Supply Outlook in April 2019 that provides valuable information and forecasting to envisage the APEC renewable energy roadmap for the doubling goal. EGNRET will also continue cooperating with EGEDA to track the renewable energy data in the APEC region.

EGNRET delegates’ suggestions regarding the renewable energy doubling goal are listed below:

- Suggest to look back at the history what happened in the region and understand the reason why APEC region can't achieve the doubling renewable energy goal in the BAU scenario in the projection.
Economy growth quickly in the APEC region could be one reason, because APEC economies would increase the energy demand and fossil fuel uses when we push economic growth. Therefore, we may need to consider to change our action plan, have more activities and help some economies who need more renewable energy development and work together to achieve the target.
- The policy makers should be proactive to integrate renewable energy development, since most of electricity contracts and developments are long-term and energy demand could be filled up by the non-renewable energy if we do not have proactive action.
- The regulatory is important for renewable energy development, so we could have more regulator workshop to share the best practice to benefit economies.

In addition, meeting arrangement is another approach for enhancing cross fora cooperation. The discussion regarding this issue are listed below.

- Inviting more than one APEC fora such as LCMT-TF, EGEDA or APERC to have the joint meeting in the future would be the option.
- The agenda arrangement would be important if we have the joint

meeting. The discussion topics could not be too broad to lose focus, but the topics should be involved in the different fora to let all the participants to join the discussion.

- Changing the meeting frequency to have only one EGNRET meeting per year is an option. But delegates suggested to consider what kind of material and updates we could report to the EWG meeting twice a year.

B. Topic 2: Policy Dialogue and Post 2020

EGNRET Secretariat introduced two documents, Policy Dialogue and Post 2020. EGNRET delegates shared their comment on these two documents in the meeting.

The documents will be revised based on the suggestions and circulated to all EGNRET members, then the revised documents will be reported to the EWG meeting for discussion.

In the meantime, EGNRET Secretariat also introduced two documents, EWG Strategic Plan and EWG Work Plan, which have been endorsed by EWG members. EGNRET Secretariat highlighted the tasks and work related to EGNRET in these two documents.

(6) Administration and Operation- Coming Events and Next Expert Group Meeting

EGNRET Secretariat announced that Republic of Korea will host the next EGNRET meeting (EGNRET 53). It will be held in Seoul, Republic of Korea on 22-24 October 2019 and be held alongside with International Renewable Energy Conference (IREC) of REN 21 event. There will be many side events during the week, and EGNRET members are welcomed to visit and join the REN 21 activities. The meeting venue will be at COEX, Seoul, Republic of Korea.

(Special gratitudes are due to Hong Kong, China representative, Mr. Harry Lai and his team from the EMSD for their kind assistance and coordination on meeting affairs.)

The EGNRET 52 meeting presentations are available on EGNRET website at:

<https://www.egnret.ewg.apec.org/EGNRET52>

ANNEX 1: LIST OF PARTICIPANTS

No.	Title	Name	Economy	Organization
1	Mr.	LAI Hon Chung, Harry	Hong Kong, China	Electrical and Mechanical Services Department
2	Mr.	CHU Kei Ming, Barry	Hong Kong, China	Electrical and Mechanical Services Department
3	Ms.	CHEUNG Man Chit, Jovian	Hong Kong, China	Electrical and Mechanical Services Department
4	Mr.	YU Wai Lee, Willy	Hong Kong, China	Electrical and Mechanical Services Department
5	Mr.	NG Chi Shing, Senna	Hong Kong, China	Electrical and Mechanical Services Department
6	Dr.	Samuel CHUI	Hong Kong, China	Environmental Protection Department
7	Mr.	T.K. CHENG	Hong Kong, China	Environmental Protection Department
8	Ms.	Luz Ubilla Bórquez	Chile	Ministry of Energy
9	Mr.	Budi Utomo	Indonesia	Coordinating Ministry for Economic Affairs
10	Mr.	Sunandar	Indonesia	Coordinating Ministry for Economic Affairs
11	Mr.	Wahid Nugroho	Indonesia	Ministry of Energy and Mineral Resources
12	Mr.	Sugeng Prahoro	Indonesia	Ministry of Energy and Mineral Resources
13	Mr.	Takao Ikeda	Japan	The Institute of Energy Economics Japan
14	Mr.	Tomonori Kawamura	Japan	Ministry of Economy, Trade and Industry
15	Ms.	Marissa Cerezo	Philippines	Department of Energy

EGNRET 52

No.	Title	Name	Economy	Organization
16	Ms.	Cheryl Leem	Singapore	Energy Market Authority of Singapore
17	Ms.	Wan Tsun Liao	Chinese Taipei	Bureau of Energy
18	Mrs.	Munlika Sompranon	Thailand	Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
19	Ms.	Sutthasini Glawgitigul	Thailand	Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
20	Dr.	Cary Bloyd	United States	Pacific Northwest National Laboratory
21	Mr.	Tuan Nguyen	Viet Nam	Multilateral Trade Policy Department, Ministry of Industry and Trade
22	Mr.	Alexey Kabalinskiy	APERC	Asia Pacific Energy Research Centre (APERC)
23	Dr.	NGUYEN Linh Dan	APERC	Asia Pacific Energy Research Centre (APERC)
24	Dr.	Li Zhu	APSEC	APEC Sustainable Energy Center
25	Dr.	Yong Sun	APSEC	APEC Sustainable Energy Center
26	Mr.	Steivan Defilla	APSEC	APEC Sustainable Energy Center
27	Mr.	James M. Kendell	EGEDA	Asia Pacific Energy Research Centre (APERC)
28	Dr.	Tom, H. T. Lee	EGNRET Chair	Industrial Technology Research Institute

EGNRET 52

No.	Title	Name	Economy	Organization
29	Dr.	Tarcy Sih-Ting Jhou	EGNRET Secretariat	Industrial Technology Research Institute
30	Mr.	Duncan WONG	Hong Kong, China	The Hong Kong and China Gas Company Limited
31	Mr.	Pak Leung YUEN	Hong Kong, China	Housing Authority
32	Ms.	Rachel Estrada	United States	National Association of Regulatory Utility Commissioners (NARUC)