

# EGNRET 48

## 1. EGNRET Activities

The 48th Meeting of the APEC Expert Group on New and Renewable Energy Technology (EGNRET 48) was held in Jeju, Republic of Korea on 27th to 31st March, 2017, and it was the joint meeting with the 49th Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEE&C49). Three APEC Workshops, which are (1) (EGNRET) APEC Workshop on Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region , (2) (EGEE&C) APERC Workshop for energy efficiency policy evaluation, (3) (EGEE&C) Workshop for energy efficiency standard of transformer, were held alongside the meeting.

The EGNRET 48th meeting was chaired by EGNRET Chair, Dr. Chung-Hsien Chen of the Bureau of Energy, Chinese Taipei. Representatives are from Hong Kong, China, Indonesia, Japan, Republic of Korea, Malaysia, the Philippines, Singapore, Chinese Taipei, Thailand, USA, and other APEC representatives from APEC Policy Partnership on Food Security (PPFS), APEC Expert Group on Energy Data Analysis (EGEDA), Asia Pacific Energy Research Centre (APERC), APEC Sustainable Energy Center (APSEC) and Low Carbon Model Town Task Force (LCMT-TF) participated in the meeting. In addition, delegates from The International Renewable Energy Agency (IRENA), National Renewable Energy Laboratory (NREL) / Clean Energy Solution Center (CESC), International Copper Association (ICA) and Malaysia Biomass Industries Confederation (MBIC) were also invited to participate in the meeting.

There were ten invited presentations in the meeting. Eight of them were given in person: “The Dissemination Plan of Low-Carbon Model Town (LCMT) Project” by LCMT-TF, “EGEDA Update” by EGEDA, “APERC Activities Overview” by APERC, “Roadmap for Renewable Energy Future” by IRENA, “Collaboration Opportunities Between PPFS & EGNRET” by APEC PPFS, “Clean Energy Solutions Center - Assisting countries with clean Energy Policy” by CESC, “Biomass Landscape in Malaysia & Potential Collaborations with APEC” by MBIC and “APEC – SHINE Facility” by ICA. In addition, Mr. Simone Landolina, Head of International Partnership and Initiatives of IEA, delivered a presentation on “IEA Technology Roadmaps: Pathways for the Energy Transition” and Penelope Howarth, Program Director of APEC Secretariat made presentation “APEC secretariat EWG Project Process and Observations from Completed Projects” via conference call.

In order to push forward the renewable energy doubling goal, the meeting theme of member economy presentation for EGNRET 48 was “How to achieve the renewable energy goal in APEC Region”.

Moreover, the Terms of Reference (ToR) of EGNRET was discussed and revised in the EGNRET 48 meeting and EGNRET secretariat has revised the ToR and circulated for endorsement by EGNRET Representatives.

EGNRET is particularly grateful to Republic of Korea for hosting EGNRET 48, and special gratitude is due to EGNRET Vice Chair, Gavin Yu, and his Korea Energy Agency colleagues for their kind assistance and arrangement on EGNRET 48 meeting affairs. All EGNRET 48th meeting presentations are available on the website at:

<http://www.egnret.ewg.apec.org/meetings/egnret48/index.html>

## **2. Discussion during EGNRET 48 Meeting**

Two major topics were discussed in the EGNRET 48th meeting, including: (1) Renewable Energy Doubling Goal by 2030 and (2) Further cooperation with EGEE&C, EGEDA, PPFS, NREL, APERC and IRENA.

### **(1) Renewable Energy Doubling Goal by 2030**

The United Nations Secretary-General launched a pioneering new initiative, Sustainable Energy for All (SE4ALL), on 1 Nov 2011, to mobilize urgent global action: Double the share of renewable energy in the global energy mix by 2030. Energy Ministers at EMM 11 (2014) also instructed the EWG through the EGNRET to develop the road map for the aspiration goal of doubling the share of renewable in the APEC energy mix, including in power generation by 2030.

In order to step toward to the goal of doubling the renewable energy share and promote renewable energy in APEC region, EGNRET has proposed a project by Chinese Taipei to develop a roadmap toward renewable energy doubling goal by 2030, and this project would like to collaborate with APEC sub-groups and APEC economies.

Chinese Taipei Representative made a presentation “Next Steps toward Achieving Renewable Energy Doubling Goal” to introduce the background of renewable doubling goal and presented the project progress on developing roadmap for achieving renewable energy doubling goal in APEC region, for instance, the roadmap development would be separated as two phases and a review mechanism.

EGNRET is grateful that APERC is going to assist the quantitative analysis for the renewable energy roadmap, EGEDA is willing to provide APEC renewable energy data for promoting renewable energy development in APEC region and IRENA is delighted to share their experience on developing renewable energy roadmap. In the meantime, EGNRET would like to build a renewable energy network among APEC economies for discussing and planning renewable energy strategies to strength APEC renewable energy roadmap.

## **(2) Further cooperation with EGEE&C, EGEDA, PPFS, NREL , APERC and IRENA**

In EGNRET 48, the possible cooperation between APEC EGNRET and APEC PPFS was highlighted and discussed. The cooperation could be exchange of information on biomass resources, and applying renewable energy on agriculture and fishery sectors.

First, PPFS mentioned that 30% to 40% cost of farm is utility expense, so experts from EGNRET suggested to spread renewable energy technology to apply in the agriculture and fish farms in the APEC region, and also shared the PV-ESCO model, a financial mechanism to provide the economic benefits to farmers directly in the APEC regions to assist the farmers and their family in reducing the cost. Second, PPFS is pleased to share the information about the agricultural waste with EGNRET, so EGNRET could have more information on feedstocks for developing biomass energy. Therefore, EGNRET and PPFS will cooperate to enhance food security and renewable energy development in the APEC region.

IRENA, APERC, NREL and EGEDA are pleased to cooperate with EGNRET and the cooperation could be including providing assistance and sharing of experience on developing renewable energy roadmap in the APEC region.

## **3. EGNRET Project Update**

The EGNRET has a variety of projects underway to facilitate the use of renewable energy technologies in the APEC region.

There are 15 ongoing projects and 4 projects have completed since EWG 52. Also, 5 projects have already been successful in gaining in-principle approval for APEC funding in Session 1, 2017 and 2 new project Concept Notes have been submitted for funding in Session 2, 2017.

4 EGNRET completed projects are “APEC Public-Private Dialogue on Promoting Trade and Investment in Renewable and Clean Energy” (EWG 20 2015), “Strategy for Large-Scale

Implementation of Biogas Capture from Palm Oil Mill Effluent and Reuse for Renewable Electricity Generation” (EWG 25 2015A), “Case Studies on the Best Practices of Wind Energy Development in APEC Region” (EWG 24 2015A) and “APEC Workshop on Promoting the Development of Biomass Energy” (EWG 16 2015A ).

EGNRET projects are listed below.

**(1) Completed Projects since EWG 52 (4 projects)**

	Project Title	Sponsor Economy	Project Number
1	Strategy for Large-Scale Implementation of Biogas Capture from Palm Oil Mill Effluent and Reuse for Renewable Electricity Generation	United States	EWG 25 2015A
2	APEC Public-Private Dialogue on Promoting Trade and Investment in Renewable and Clean Energy	Viet Nam	EWG 20 2015A
3	Case Studies on the Best Practices of Wind Energy Development in APEC Region	Viet Nam	EWG23 2015A
4	APEC Workshop on Promoting the Development of Biomass Energy	Viet Nam	EWG 16 2015A

## (2) On-going projects (14 projects)

Project Title		Sponsor Economy	Project Number
1	Promoting Renewable Power Generation with Fuel Cell Technologies	China	EWG 13 2015A
2	A Comparative Study on Multi-Field Applications of Building-Mounted Photovoltaic (BMPV) in the APEC Region	China	EWG 18 2015A
3	Developing Solar-Powered Emergency Shelter Solutions (SPESS) as an Energy-Resilience Tool for Natural Disaster Relief in APEC Community	China	EWG 22 2015A
4	Study on the Cost-Effective Renewable Energy-Supply Solutions based on Innovative Solar Technologies to Promote Green Buildings in APEC Region	China	EWG 03 2016A
5	Research on Energy Storage Technologies to Build Sustainable Energy Systems in the APEC Region	China	EWG 04 2016A
6	Off Grid Electrification Option for Remote Regions in APEC Economies	China	EWG 07 2016A
7	Small and Medium PV System Database in the APEC Region	Thailand	EWG 14 2015A
8	Renewable Energy Safety in APEC	Thailand	EWG 17 2015A
9	Guidelines toward High Biodiesel Blend Diesel (eg B20) Specification in the APEC Region	Thailand	EWG 20 2016A
10	Long term reliability study of PV systems for installation on islands	Chinese Taipei	EWG 21 2015A
11	Best Practices for Developing the Green Energy Smart Farm in the APEC Region	Chinese Taipei	EWG 23 2015A
12	Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region	Chinese Taipei	EWG 11 2016A
13	Heating Applications of Bio-pellet Made from Ecological-hazard Plant in Small and Medium Enterprises to Enhance Utilization of Renewable Energy in the APEC Region	Chinese Taipei	EWG 18 2016A
14	Strategy for Large-Scale Implementation of Biogas Capture from Palm Oil Mill Effluent and Reuse for Renewable Electricity Generation	USA	EWG 25 2015A

## (3) In-principle approval for APEC funding for Session 1, 2017 (5 Projects)

Project Title		Proposed Economy
1	Making the Case for Clean Energy Investments with Life-Cycle Impact Assessments	USA
2	Economic and Life Cycle Analysis of Solar Photovoltaic Systems in APEC region toward Low-carbon Society	Malaysia
3	APEC Peer Review on Low-carbon Energy Policies (PRLCE) Phase 4	Japan
4	Technical Analysis to support development and deployment of Renewable Energies in APEC Region	China

Project Title		Proposed Economy
5	Improving User-side Clean Energy Consumption in the APEC Region by Utilizing Distributed Solar PV and Energy Storage	China

#### (4) The proposing Concept Notes for Session 2, 2017 (2 projects)

Project Number by EGNRET	Project Title	Proposed Economy
NRE172-1	Empowering a Distributed Energy Resource Future	Thailand
NRE172-2	Strengthening Sustainable Growth by Promoting the Development of Offshore Wind Power in the APEC Region	China

### 5. Prospective of EGNRET Works in 2017

EGNRET will develop and implement projects that contribute to the EWG's objectives and strategic initiatives. The projects will be implemented primarily through the following Initiatives and Leaders' Declarations including APEC 21st Century Renewable Energy Development Initiative, Energy Smart Communities Initiative (ESCI), APEC Smart Grid Initiative (ASGI) and Doubling the share of renewables in the APEC energy mix by 2030.

EGNRET member are encouraged to promote urban sustainable development in the APEC region through smart cities development and the exchange of best practices on deployment of new and renewable energy technologies combined with smart grid, energy efficiency, etc. Furthermore, EGNRET will conduct research related to doubling the share of renewables by 2030 in APEC's energy mix.

EGNRET will strengthen collaboration with other APEC fora such as APERC, EGEE&C, EGEDA, APSEC, LCMT Task Force, PPFs, Policy Partnership on Science, Technology, and Innovation (PPSTI), and disseminating results of related APEC projects, e.g., PRLCE and PREE, and LCMT, and collaborate with International Energy Agency (IEA), International Renewable Energy Agency (IRENA), Economic Research Institute for ASEAN and East Asia (ERIA), Energy Research Institute Network (ERIN), Clean Energy Solutions Center from the Clean Energy Ministerial, and International Copper Association Ltd. (ICA) on promotion of renewable energy in the APEC region.