

EGNRET 46

1. EGNRET Activities

The 46th meeting of the Expert Group on New and Renewable Energy Technologies (EGNRET 46) was held on April 11 to 15, 2016 in Taichung, Chinese Taipei. Two APEC Workshops were held alongside the meeting including APEC Workshop on Ethanol Trade Development as Part of APEC's Renewable Fuel Strategy (EWG 12 2015A) and APEC Workshop on Developing the Green Energy Smart Farm (EWG 23 2015A). In addition to EGNRET 46, a two-session Joint Meeting with the APEC Expert Group on Energy Efficiency and Conservation (EGEE&C) was held on April 13 and 14. A site visit to the i3 Travel Project - Low Carbon Tourism and Intelligent Transportation Services in Sun-Moon-Lake (2015 ESCI Annual Best Practices GOLD Award) was scheduled on April 15.

The EGNRET 46th meeting was chaired by EGNRET Chair, Dr. Chung-Hsien Chen of the Bureau of Energy, Chinese Taipei. EGNRET Representatives from Hong Kong, China, Japan, Malaysia, the Philippines, Chinese Taipei, Thailand and USA, and other APEC representatives from APEC Secretariat, EWG, APEC Expert Group on Energy Data Analysis (EGEDA), Asia Pacific Energy Research Centre (APERC), and APEC Sustainable Energy Center (APSEC) participated in the meeting.

In order to push forward the renewable energy doubling goal, the meeting theme of member economy presentation for EGNRET 46 was Development of Distributed Energy and/or New Energy Technologies in APEC Economies.

Ms. Penelope Howarth, Program Director of the APEC Secretariat was invited to present Guideline for Applying APEC-Funded Projects, and Ms. Elena Thomas-Kerr, Senior Advisor at U.S. Department of Energy represented Energy Working Group (EWG) was also invited to deliver Possible APEC Collaboration with IRENA and other International Organizations toward Renewable Energy Goal at the meeting. In addition, Ms. Tran Thi Lien Phuong from APERC was invited to present the PRLCE Phase 3 in Viet Nam.

Also, two major topics were discussed at EGNRET 46 including Possible APEC Collaboration with IRENA and other International Organizations toward Renewable Energy Goal, and Projecting RE Doubling Goal by 2030.

All EGNRET 46th meeting presentations will be available on the website soon at:
<http://www.egnret.ewg.apec.org/meetings/egnret46/index.html>

Moreover, the EGNRET Chair was invited to give the presentation at APEC Workshop on

A Comparative Study on Multi-field Applications of Building Mounted Photovoltaic (BMPV) in the APEC Region (EWG 18 2015A) held in Beijing, China on April 20 - 21, 2016.

2. EGNRET/EGEE&C Joint Meeting 2016

Two sessions of the Joint Meeting with the APEC Expert Group on Energy Efficiency and Conservation (EGEE&C) alongside EGNRET 46 were held in the morning of April 13, and the afternoon of April 14, 2016, respectively. The last Joint Meeting of two groups was taken place in Honolulu, USA on April 9, 2014.

The meeting theme of the Joint Meeting was How to Achieve Sustainable and Resilient Energy Development in APEC Region in Line with COP21. The joint project opportunities for EGNRET and EGEE&C were also discussed.

Except the presentation on Energy Situation in Chinese Taipei by Chinese Taipei's Representative, six invited presentations were arranged in the Joint Meeting, including (1) High-level APEC Update by Ms. Penelope Howarth, Program Director, APEC Secretariat, (2) APEC EWG Update by Ms. Elena Thomas-Kerr, US EWG Representative on behalf of EWG Lead Shepherd, Dr. Phyllis Yoshida, (3) APEC Energy Demand and Supply Outlook, 6th Edition by APERC, (4) Progress Report of EGEDA by EGEDA, (5) APEC Low-Carbon Model Town Projects by APERC represented for LCMT TF, and (6) APSEC Updates by APSEC.

Moreover, both Chairs also presented the respective meeting outcomes at the end of the Joint Meeting.

All Joint Meeting presentations will be available on the website soon at:
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3. Discussion during the EGNRET 46 Meeting

Two major topics were discussed in the EGNRET 45th meeting including (1) Possible APEC Collaboration with IRENA and other International Organizations toward Renewable Energy Goal, and (2) Projecting RE Doubling Goal by 2030.

(1) Possible APEC Collaboration with IRENA and other International Organizations toward Renewable Energy Goal

Ms. Elena Thomas-Kerr (US EWG Representative) gave a presentation about the possible APEC collaboration with IRENA and other international organizations (i.e., ASEAN) toward

renewable energy doubling goal.

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 aspirational goal of doubling the share of renewables in the APEC energy mix, including in power generation by 2030.

To attain this goal, EGNRET would like to cooperate with IRENA or other organizations to conduct research on the economic benefits and cost-effectiveness of utilizing renewable energy, and integrate it into power grids so as to support R&D, innovation and commercialization of clean energy technologies, and to promote practical cooperation on renewable technologies, equipment and services among member economies.

Currently, IRENA, Clean Energy Ministerial (CEM), REN21, World Bank, IEA, and ASEAN are reviewing trends, analyzing RE technologies, assessing barriers to renewable energy development, and seeking way to accelerate its deployment.

The proposed APEC-IRENA Work Plan Proposal aims to leverage the expertise and resources of international organizations. The work plan was based on IRENA's initial draft work program for 2016-2017 to capitalize on efforts already underway without requiring significant additional resources from IRENA to collaborate with APEC. The proposed areas for APEC-IRENA collaboration were meant for discussion purposes only to generate dialogue and ideas - not to be a prescriptive or exhaustive list for cooperation. However this work plan has not been vetted by IRENA.

(2) Projecting RE Doubling Goal by 2030

A new Concept Note titled Fill the Gap to Reach the RE Doubling Goal was proposed by Chinese Taipei, and co-sponsored by the Philippines, Thailand, and United States.

The main objectives of this project are to evaluate the renewable energy development potential in the APEC region, and to develop a strategic roadmap toward the goal of doubling renewable energy. This project aims to assess the gap in renewable energy development and evaluate how much capacities and renewable energy development potentials could fill this gap toward the doubling renewable energy goal. This project will develop a strategic roadmap toward reaching the goal and establish a cooperative network among APEC economies to develop and promote renewable energy in the region.

To follow-up the project, an initiative for fill the gap to reach the RE doubling goal will be

prepared by EGNRET, collaborated with IRENA and other APEC sub-groups in the near future for enhancing renewable energy utilization.

EGNRET will continue work with EGEDA, EGEE&C, and APERC in the APEC Region, and will also try to communicate with IRENA, IEA, and ASEAN to get the most useful information for push forward the doubling goal. EGNRET will also continue to discuss and look into the priority of different technology and/or strategy is required for all APEC Region or each Economy, and will also encourage each economy to submit the proposal based on the identified priority in order to remove the barrier and speed up the employment of renewable energy.

4. EGNRET Project Update

The EGNRET has variety of projects underway to facilitate the use of renewable energy technologies in the APEC region. The following table shows the success rate of EGNRET project submission since late 2012.

Year	Session	Success rate of EGNRET project submission
2012	S3	83.3%
2013	S1	50.0%
	S2	100.0%
	S3	100.0%
2014	S1	23.0%
	S2	14.3%
2015	S1	70.0%
	S2	100.0%

Currently, five EGNRET projects have been completed during 2014 - 2015, and 13 on-going projects from 2015. In addition, ten new project Concept Notes have been submitted for funding in Session 1, 2016, and 2 new project Concept Notes are submitted for funding in Session 2, 2016

The above projects are listed below.

(1) Completed Projects 2014-2015 (5 projects)

Project Title	Proposing Economy	Project Number
2014 APEC Workshop on Biodiesel Application Experiences	Chinese Taipei	EWG 01 2014S

APEC Peer Review on Low-Carbon Energy Policies (PRLCE), Phase 3	Japan	EWG 01 2014A
APEC Public-Private Dialogue on Addressing Impediments in Financing Renewable Energy	Viet Nam	EWG 02 2014A
APEC Photovoltaic System Best Practices and Latest Development Comparative Study (PV-BPLD)	China	EWG 03 2014A
Realization of APEC Low Carbon Model Town through Smart Grid Development (LCMT-SGD)	Thailand	EWG 07 2014A

(2) On-going Projects 2015-2016 (13 projects)

Project Title	Proposing Economy	Project Number
Promoting Renewable Power Generation with Fuel Cell Technologies	China	EWG 13 2015A
A Comparative Study on Multi-Field Applications of Building-Mounted Photovoltaic (BMPV) in the APEC Region	China	EWG 18 2015A
Renewable Energy Safety in APEC	Thailand	EWG 03 2014A
Small and Medium PV System Database in the APEC Region	Thailand	EWG 14 2015A
APEC Workshop on Promoting the Development of Biomass Energy	Viet Nam	EWG 16 2015A
APEC Workshop on Promoting the Development of Wind Energy, Phase 2 – Public Private Partnership for Wind Energy Development	Viet Nam	EWG 15 2015A
Ethanol Trade Development as Part of APEC's Renewable Fuel Strategy	USA	EWG 12 2015A
APEC Public-Private Dialogue on Promoting Trade and Investment in Renewable and Clean Energy	Viet Nam	EWG 20 2015A
Best Practices for Developing the Green Energy Smart Farm in the APEC Region	Chinese Taipei	EWG 23 2015A
Strategy for Large-Scale Implementation of Biogas Capture from Palm Oil Mill Effluent and Reuse for Renewable Electricity Generation	United States	EWG 25 2015A
Case Studies on the Best Practices of Wind Energy Development in APEC Region	Viet Nam	EWG 24 2015A
Long-Term Reliability Study of Photovoltaic (PV) Systems for Installation on Islands	Chinese Taipei	EWG 21 2015A
Developing Solar-Powered Emergency Shelter Solutions (SPESS) as an Energy-Resilience Tool for Natural Disaster Relief in APEC Community	China	EWG 22 2015A

(3) New proposed Concept Notes for Session 1, 2016 (10 projects)

Project Number by EGNRET	Project Title	Proposing Economy
[NRE161-1]	Develop Concentrating Solar Power (CSP) Technology to Promote Renewable Energy Resilience in APEC Region	China
[NRE161-2]	Off Grid Electrification Option for Remote Regions in APEC Economies	China
[NRE161-3]	Promoting innovative green financing mechanisms for sustainable urbanization and quality infrastructure development in APEC region	China
[NRE161-4]	Study on the cost-effective renewable energy-supply solutions based on innovative solar technologies to promote green buildings in APEC region	China
[NRE161-5]	Strategic Plan to Implement APEC Cooperation Initiative for Jointly Establishing the Asia-Pacific Urbanization Partnership	China
[NRE161-6]	Research on Energy Storage Technologies to Build Sustainable Energy Systems in the APEC Region.	China
[NRE161-7]	APEC Network on Demonstration of Innovative Two-stage Bio-gaseous Production and Bioelectricity Generator from POME	Chinese Taipei
[NRE161-8]	The Legal Practices on the Privacy Right Protection under Development of Smart Meters in the APEC Region	Chinese Taipei
[NRE161-9]	Guidelines toward high biodiesel blend diesel (e.g. B20) specification in the APEC region	Thailand
[NRE161-10]	Case Studies on District Energy Application for Low Carbon Town Projects in APEC regions	China

(4) New proposed Concept Notes for Session 2, 2016 (2 projects)

Project Number by EGNRET	Project Title	Proposing Economy
[NRE162-1]	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
[NRE162-2]	Filling the Gap to Reach the Goal of Doubling Renewable Energy in the APEC Region	Chinese Taipei

Moreover, 11 workshops related to EGNRET projects held in 2015-2016 are shown as follows.

Date	Workshop	Venue
15 Apr 2015	Final Dissemination Workshop: Capacity Building for Installers and System Designers for Solar PV Rooftop Installations (EWG 22/2013A)	Laoag, Philippines
5 - 6 Aug 2015	APEC Public - Private Dialogue on Addressing Impediments in Financing Renewable Energy (EWG 02/2014A)	Ho Chi Minh, Viet Nam
24 - 25 Sep 2015	APEC Workshop on Promoting the Development of Wind Energy, Phase 2 – Public-Private Partnership for Wind Energy Development (EWG 15/2015A)	Hanoi, Viet Nam
25 - 26 Sep 2015	Workshop on APEC Photovoltaic Communication and Cooperation Platform (PVCCP) (EWG 16/2013A)	Beijing, China
25 - 26 Sep 2015	APEC Photovoltaic System Best Practices and Latest Development Comparative Study (PV-BPLD) EWG (03/2014A)	Beijing, China
10 - 11 Nov 2015	Workshop on Experiences and Plans to Double Renewable Energy Utilization by 2030 (EWG 05/2015A)	Daegu, Korea
18 Nov 2015	APEC Workshop on Best Practices In Developing New and Renewable Energy (EWG 09/2015S)	Xiamen, China
19 Nov 2015	Final Dissemination Workshop on District Energy Systems Development Roadmap Study in APEC Economies (EWG 24 2013A)	Xiamen, China
18-19 Jan 2016	The 2016 APEC Fuel Cell Forum on Promoting Renewable Power Generation with Fuel Cell Technologies (EWG 13 2015A)	Beijing, China
11-12 Apr 2016	APEC Workshop on Ethanol Trade Development as Part of APEC 's Renewable Fuel Strategy (EWG 12 2015A)	Taichung, Chinese Taipei
12-13 Apr 2016	APEC Workshop on Developing the Green Energy Smart Farm (EWG 23 2015A)	Taichung, Chinese Taipei

5. Prospective of EGNRET Works in 2016

The EGNRET will focus more on RE doubling goal, smart grid, low carbon town, etc. which are directly related to the SE4All, ESCI and APEC ASGI.

EGNRET members are encouraged to conduct researches related to reduction of energy intensity in APEC region.

EGNRET will expand the experience exchange or share of best practices for each economy to access the enough technology to further promote the renewable energy for RE doubling goal.

The EGNRET will strengthen collaboration with APEC other fora, e.g., APERC, APSEC, LCMT Task Force, EGEE&C, EGEDA, Policy Partnership on Science, Technology, and Innovation (PPSTI), and some projects, e.g., PRLCE and PREE, and LCMT supported by APERC.

Collaboration with International Renewable Energy Agency (IRENA), Economic Research Institute for ASEAN and East Asia (ERIA), Energy Research Institute Network (ERIN), and International Copper Association Ltd. (ICA) on promotion of renewable energy in the APEC region will be carried out as well.