

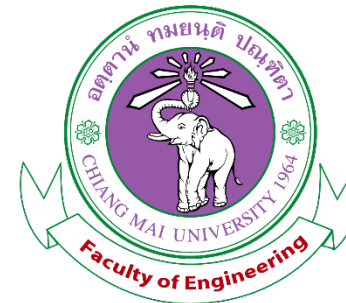


**Asia-Pacific
Economic Cooperation**



**Department of Alternative
Energy Development and Efficiency**

MINISTRY OF ENERGY



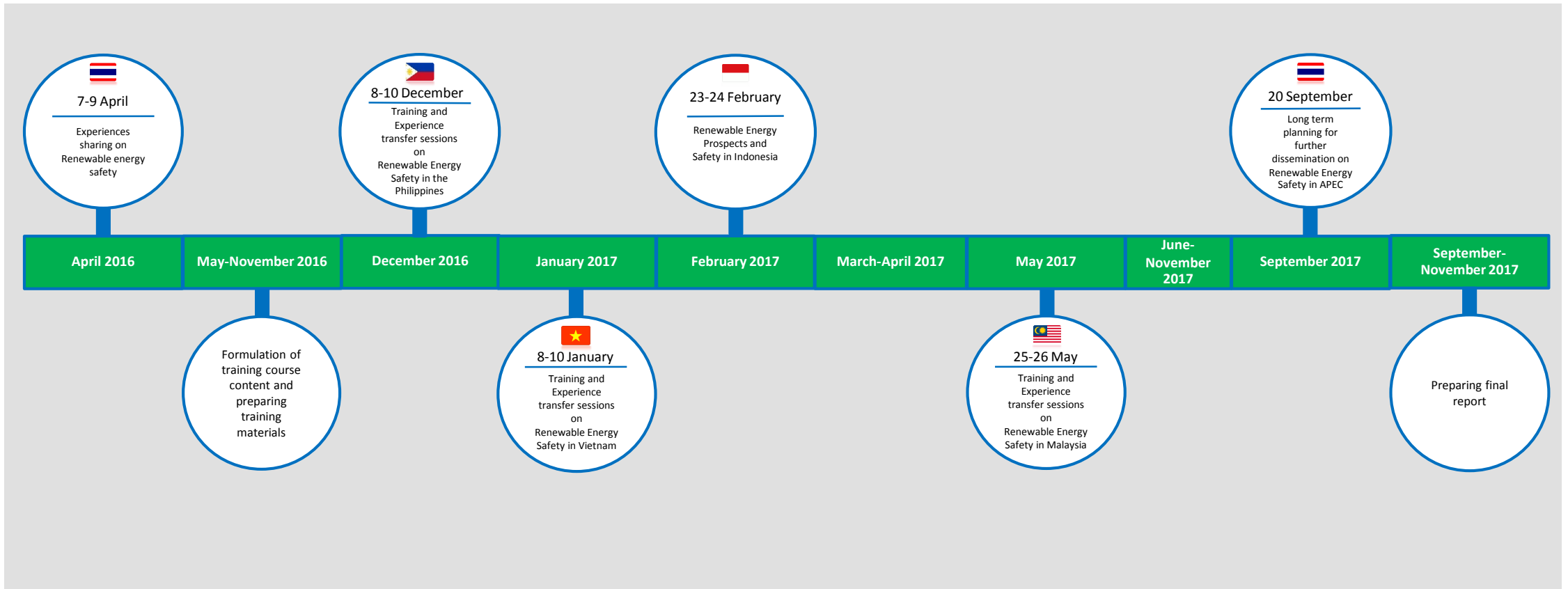
EWG 17/2015A

Renewable Energy Safety in APEC



Energy Technology for Environment Research Center | Faculty of Engineering, Chiang Mai University.

TIMELINE



1st workshop - Chiang Mai, Thailand

Venue: Faculty of Engineering, Chiang Mai University

Japan: RE status (Rapid growth of Solar PV by FIT Technology), accidents of wind and solar energy and secure energy system.

Indonesia: Energy condition, RE policy now-2050

Malaysia: Background of RE in Malaysia, Feed-in Tariff Implementation & Outcome, and Safety Issues such as competent persons, safety aspect in RE Installation and way forward.

China: Current situation (Hydropower, Solar, Wind power, Biomass, Geothermal and Distributed energy)

Thailand: Overview on RE safety activities in Thailand, RE safety materials demonstration by community energy volunteers.

The Philippines: RE developments (geothermal power, Biomass, Hydropower, Solar & wind), Renewable Energy Safety, Health and Environment Rules and Regulations (RESHERR)

Vietnam: RE technology and RE safety (Risk on biogas operation, Bio-gasoline utilization, micro hydropower project operation)



April 2016	May-November 2016	December 2016	January 2017	February 2017	March-April 2017	May 2017	June-November 2017	September 2017	September-November 2017
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Sharing an experiences



1st Site visit at Biogas Plant and Community Piping Network



2nd Site visit at Sahacogen Biomass Power Plant



2nd workshop – Manila, the Philippines

Venue: Ateneo De Manila University



Thailand: Background on Renewable Energy Safety, RE accidents in Thailand, RE safety promotion in Thailand, showing safety material that use for Energy volunteer mission.

The Philippines: Renewable energy in the Philippines, Renewable energy safety, health and environmental rules and regulation, Safety in doing solar PV system, Cases related to accident in renewable energy implementation.

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Sharing an experiences

1st Site visit at Solar Service Station (3S) Site

2nd Site visit at Pangea Biogas Power Plant



3rd workshop – Hanoi, Vietnam

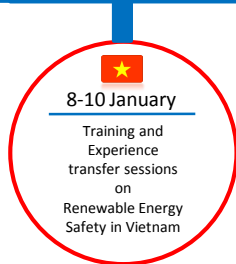
Venue: La Thanh Hotel, Hanoi, Vietnam

Thailand: Background of the project, RE accidents in Thailand, Introducing the Media Relations to promote Renewable Energy Safety, Characteristic of community-based Energy Volunteer, Community-based Energy Volunteer training and Showing Safety Material & Equipment Protection Manual

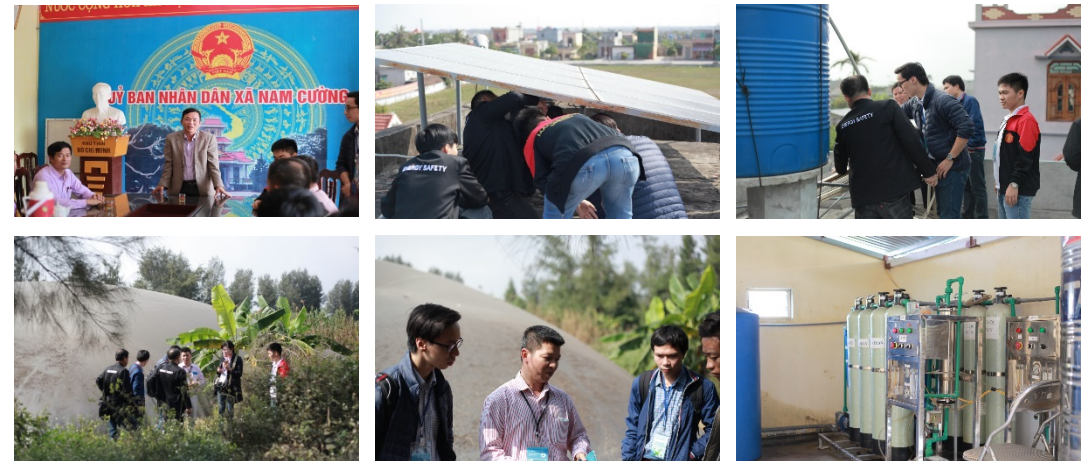
Vietnam: Current status of RE development in Vietnam, RE development and safety of renewable energy in Vietnam. Biomass and Biogas scenario in Vietnam, Project case study – Biogas and Biomass.



Sharing an experiences



Site visit at Bac Hai, Nam Cuong commune, Tien Hai district, Thai Binh province



4th workshop – Jakarta, Indonesia

Venue: Industrial Faculty, Trisakti University

Thailand: Background of project, RE accidents in Thailand, RE safety promotion in Thailand, Biogas Applications (Palm Oil Mill and Livestock Farms), Media Relations to promote Renewable Energy Safety



Indonesia: Solar mount: basic design calculation, Introduction to Renewable Energy, Solar power products and systems for sustainable energy solutions – current trends and technologies, Waste Utilization EFB for alternative fuels, Project case study – Biogas and Biomass



Sharing an experiences



Solar cell site visit at Bodyshop, Bintaro Jaya Central Business District



5th workshop – Kuala Lumpur, Malaysia

Venue: Power Energy Dedicated Advanced Centre (UMPEDAC), University of Malaya, Malaysia

Thailand: Background of the project, RE accidents in Thailand, Introducing the Media Relations to promote Renewable Energy Safety, Characteristic of community-based Energy Volunteer, Community-based Energy Volunteer training and Showing Safety Material & Equipment Protection Manual

Malaysia: Renewable energy scenario in Malaysia, Current status of PV technology – PV safety issue, current trends and technologies in Malaysia. Project case study – Stand alone and Grid connected PV system.

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Sharing an experiences



1st Site visit - Biogas plant at Gan teng Siew Realty Sdn.Bhd

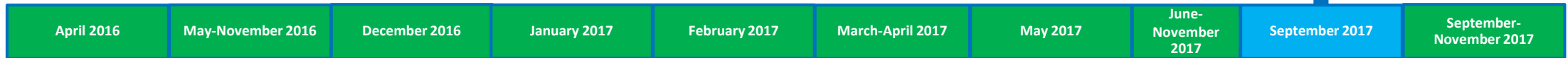


2nd Site visit - Solar PV at SunEdison



6th workshop – Chiang Mai, Thailand

- **Venue:** Faculty of Engineering, Chiang Mai University



Long-term planning for RET safety in selected APEC economies is as follows:

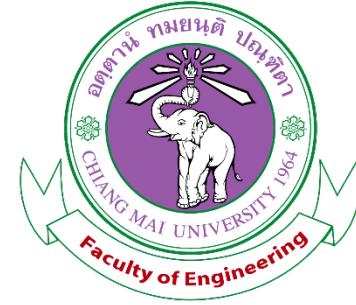
- The Philippines – put a premium on ensuring the safety of communities and the environment, especially the energy sector workers.
- Vietnam - There is no safety regulations/policies for RE in particular in Viet Nam. The policies and regulations related to RE safety need to be put into enforced soon.
 - Increase in the awareness of RE safety – Technician who works with jobs which involve dangers must always be briefed and required to wear safety gears, raising awareness and training for local people/users at communities on RE safety is very important and necessary, the cooperation and experience sharing from other countries is an important step.
- Indonesia - Safety is paramount in every facet of RE projects from conceptual to operation and maintenance, for sustainable future growth, RE safety plans must be developed and implemented.
- Malaysia – Since 2010, The Strategic Thrusts of the national RE Policy and Action Plan has been used for Promoting RE safety. This plan started with introduce legal and regulatory framework, Provide conducive business environment for RE, Intensify human capital development, Enhance RE research & development and Create public awareness & RE policy advocacy programs respectively.



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Thank you



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