

# 3-1. The 8<sup>th</sup> Energy Efficiency Policy (EEP) Workshop

## APERC Workshop

The 69<sup>th</sup> Meeting of APEC Energy Working Group (EWG69)  
25 February 2025 – Gyeongju, Korea

Ms Yasmin Fouladi, Researcher, APERC



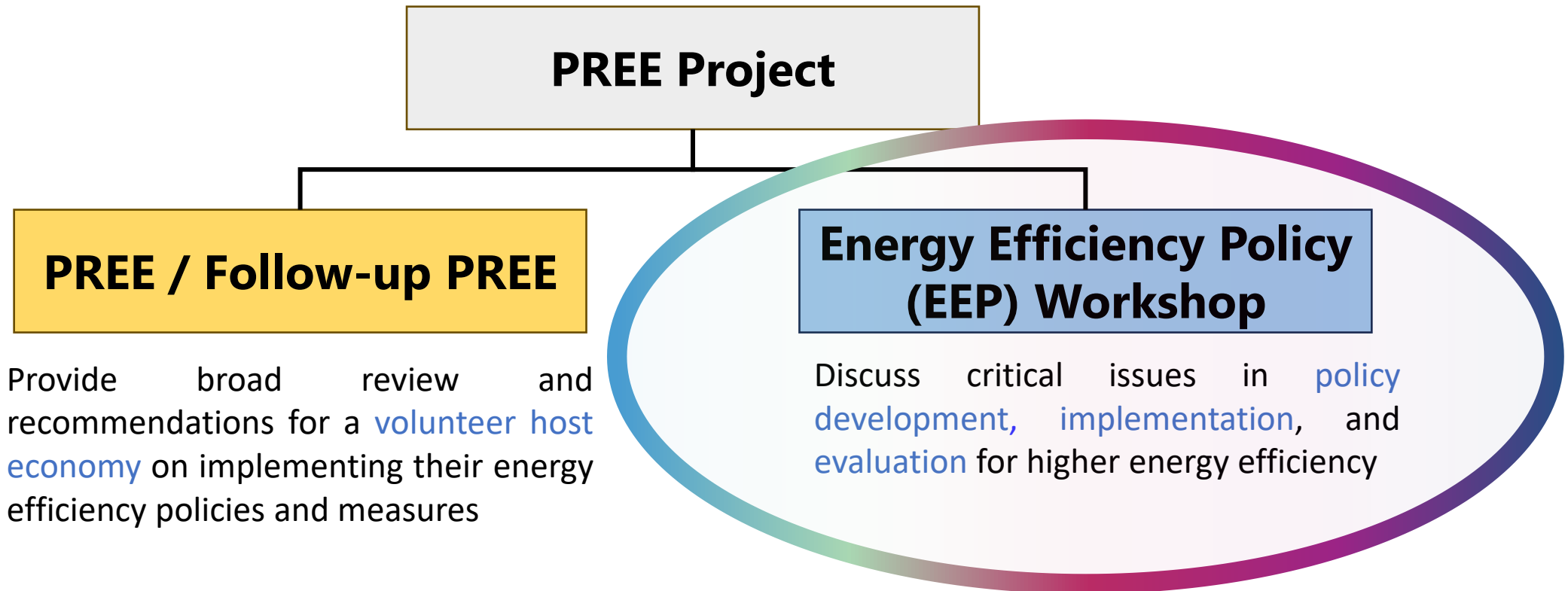
# What is the Energy Efficiency Policy (EEP) Workshop?

Discusses critical issues in policy development, implementation, and evaluation to achieve higher energy efficiency

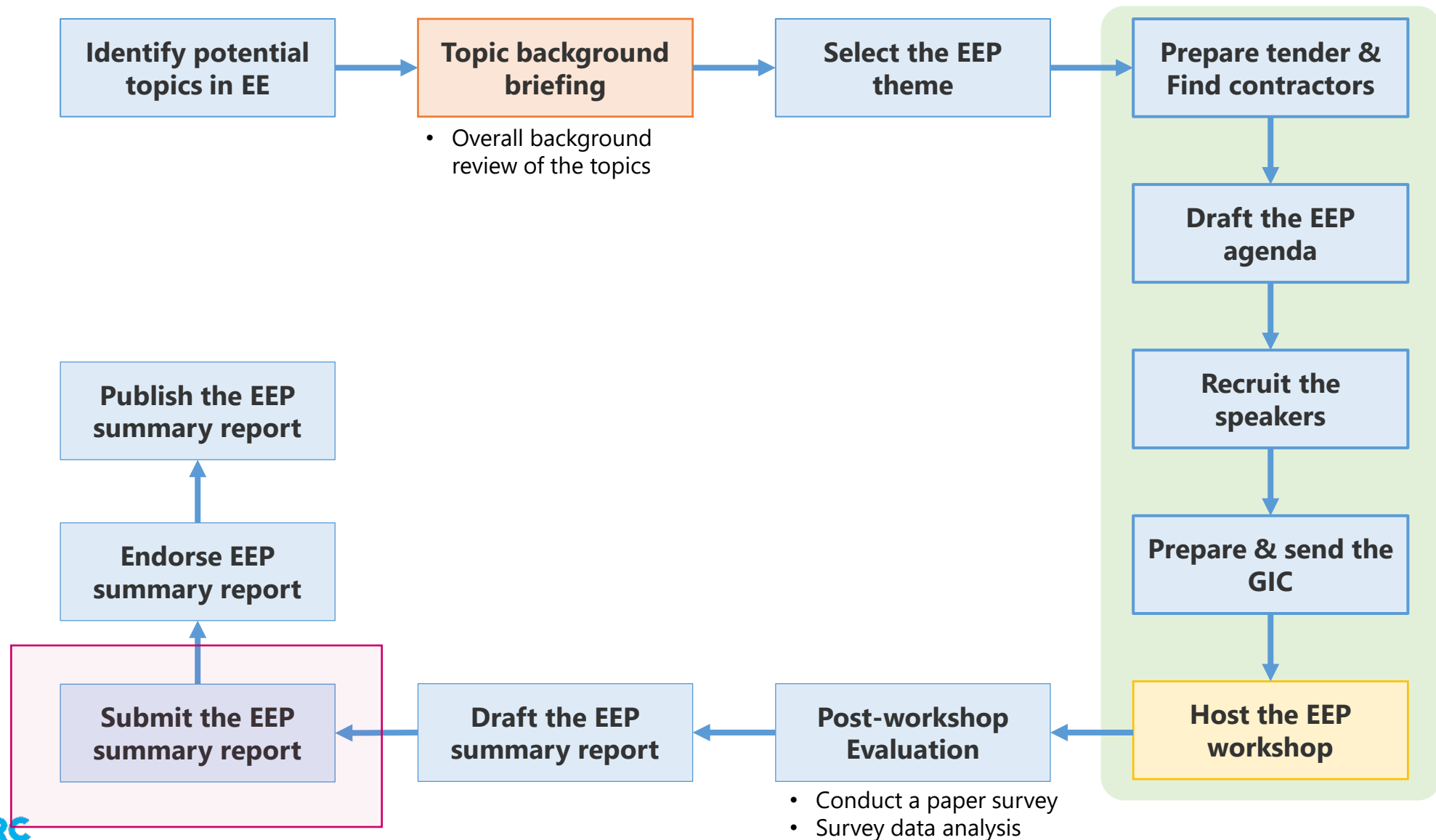
This year, the workshop was held in Tianjin, China from 5-8 November 2024

# What is the PREE (Peer Review on Energy Efficiency) project ?

- Created in 2007, following its recognition by APEC Energy Ministers in the Darwin Declaration that May and its endorsement by APEC Leaders in the Sydney Declaration that September
- Contributes towards achieving the shared APEC energy intensity reduction goal of 45% from 2005 levels by 2035



# The Workflow of the EEP Workshop



# Energy Audits and Energy Management Systems

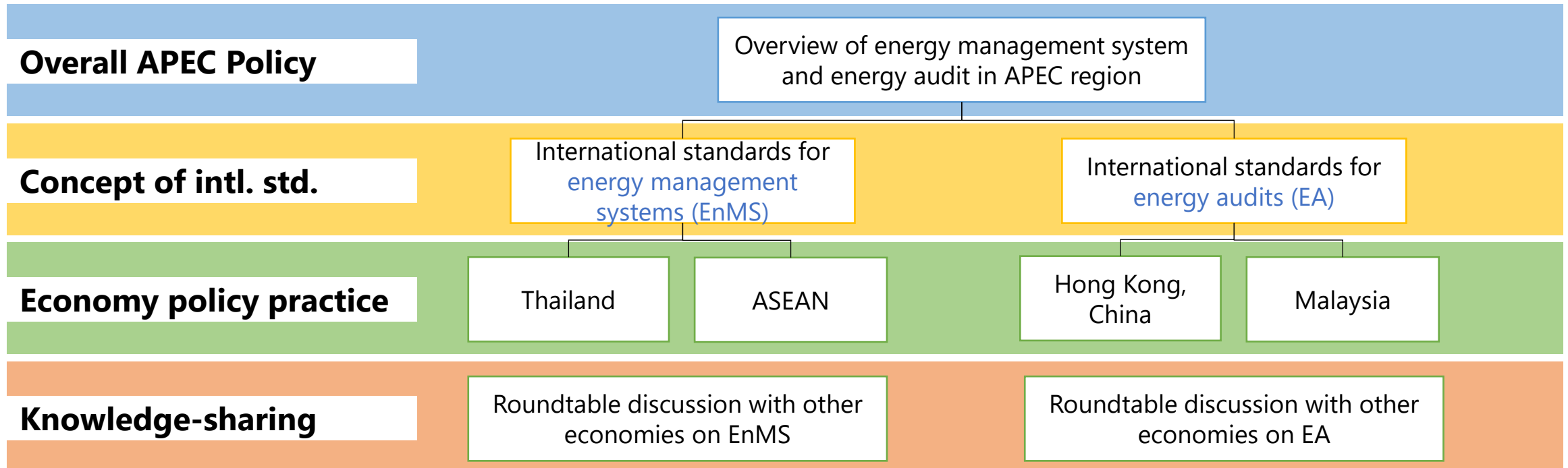
- **Energy Audit (EA):** a systematic procedure with the purpose of obtaining adequate knowledge of the energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying opportunities for cost-effective energy savings, identifying the potential for cost-effective use or production of renewable energy and reporting the findings
- **Energy Management System (EnMS):** a set of interrelated or interacting elements of a strategy which sets an energy efficiency objective and a plan to achieve that objective, including the monitoring of actual energy consumption, actions taken to increase energy efficiency and the measurement of progress

# 8<sup>th</sup> EEP Workshop:

## Energy Management: Standards, Policies and Best Practices

### Main goals:

- 1) Introduction to [energy management](#) and [energy audit standards](#) application policies in APEC economies
- 2) Concepts and application of [international standards](#) in energy management system and energy audits
- 3) Exploring the [best practices](#) in energy management systems (EnMS) and energy audit [policies and initiatives](#) in APEC economies



# What knowledge can participants gain?

- Fundamental understanding of **international standards** in Energy Management and Audits
- General status of the **Energy Management and Audit implementation** in APEC economies
- **Policies, regulations, and initiatives** in Energy Management and Audits implemented by APEC economies
- **Lessons learned and best practices** in Energy Management Systems and Energy Audits
- **Economic and environmental benefits** of effective Energy Management and Audits



# The EEP WS Agenda

## Morning session (Part 1)

### Energy Management, Standards, and Policy Practices

Time	Content
09:30~09:35	<b>Opening remarks</b>
09:35~09:40	Group photo & Introduction of the Agenda Part 1
09:40~11:25	<b>1.1</b> Energy Management Systems in the APEC Region
	<b>1.2</b> International standards on energy management: concepts and applications
	Coffee Break
	<b>1.3</b> Thailand's Energy Management, Standards, and Policy Practices
	<b>1.4</b> Policies on energy management systems (EnMS) in ASEAN
11:25~12:15	Knowledge-sharing by economies
12:15~12:20	Summary by Moderator

## Afternoon session (Part 2)

### Energy Audits, Standards, and Policy Practices

Time	Content
14:00~14:05	Introduction of the Agenda of Part 2
14:05~15:30	<b>2.1</b> Energy Audits in the APEC region
	<b>2.2</b> International standards of energy audits: concepts and applications
	Coffee Break
	<b>2.3</b> Policies and Practices for Optimizing Building Energy Efficiency in HKC
	<b>2.4</b> Policies on energy audit in Malaysia
15:30~16:40	Knowledge-sharing by economies
16:40~16:55	Post-evaluation survey & Full-day attendance confirmation via signature
16:55~17:00	<b>Closing remarks &amp; Summary</b>



# Session 1: Energy Management, Standards, and Policy Practices

Section	Time	Speaker/Moderator	Notetaking
1.1	15 mins	Mr. Ting-Jui SUN, APERC	<ul style="list-style-type: none"> <li>Introducing EnMS, <a href="#">why it is important</a>, and <a href="#">how it works in the ISO system</a></li> <li><a href="#">Policy progress</a> in the APEC region <ul style="list-style-type: none"> <li><a href="#">17 economies</a> have published their <a href="#">own standards aligned with ISO std.</a></li> <li><a href="#">6 economies</a> have <a href="#">integrated ISO 50001</a> into their mandatory measures</li> </ul> </li> </ul>
1.2	25 mins	Mrs. Deann Michelle DESAI, ISO	<ul style="list-style-type: none"> <li>Presenting content of ISO 50001 (performance-based standard)</li> <li><a href="#">Best practices</a> in industrial sites (3M) and buildings (USA federal gov.)</li> <li><a href="#">Policy initiatives</a> across different regions</li> </ul>
1.3	25 mins	Mr. Wisaruth MAETHASITH, Ministry of Energy, Thailand	<ul style="list-style-type: none"> <li>Showcasing <a href="#">Thailand's energy efficiency policy framework</a></li> <li><a href="#">Thailand's policy</a> in EnMS</li> <li><a href="#">Challenges</a> in promoting EnMS in Thailand</li> </ul>
1.4	25 mins	Dr. Zulfikar YURNAIDI, ASEAN	<ul style="list-style-type: none"> <li>Background of ASEAN <a href="#">energy demand and intensity</a></li> <li>Demonstrating <a href="#">ASEAN Energy Management Scheme (AEMAS)</a></li> <li><a href="#">Challenges</a> in promoting <a href="#">regional energy manager training and certification</a></li> </ul>
1.5	50 mins	Prof. Younsung KIM	<ul style="list-style-type: none"> <li><a href="#">THA, JPN, IND, and PRC</a> share their current progress on EnMS</li> </ul>

# Session 2: Energy Audits, Standards, and Policy Practices

Section	Time	Speaker/Moderator	Notetaking
2.1	15 mins	Mohd Shah Hambali ARIFIN, APERC	<ul style="list-style-type: none"> <li>Introducing <a href="#">energy audits</a>, their importance, and int'l/reg/local standards</li> <li>Policy progress in the APEC region               <ul style="list-style-type: none"> <li><a href="#">13 economies</a> have <a href="#">mandated EA in their EE law/regulations/program</a></li> <li><a href="#">1 economy</a> has integrated <a href="#">ISO 50002</a> into their mandatory measures</li> <li><a href="#">10 economies</a> have adopted mandatory measures with <a href="#">domestic standards and guidelines</a></li> </ul> </li> </ul>
2.2	25 mins	Kit Loong OUNG, ISO	<ul style="list-style-type: none"> <li>Presenting content of <a href="#">ISO 50002</a> (definition, type, process of EA)</li> <li>How to design the whole system to save energy</li> <li>Best practices in UK, and the need to create economy-specific EA</li> </ul>
2.3	25 mins	Man-chit (Jovian), CHEUNG, EMSD, HKC	<ul style="list-style-type: none"> <li>Showcasing current <a href="#">building energy efficiency policy, goals, and measures</a></li> <li>HKC <a href="#">mandates energy audits for commercial buildings every 10 years</a> (BEEO)</li> <li>Amending <a href="#">extending the scope, shortening intervals, and disclosure info.</a></li> </ul>
2.4	25 mins	Mr. Muhammad Khoiri ABDUL AZIZ, Energy Commission, MAS	<ul style="list-style-type: none"> <li>Showcasing <a href="#">Malaysia's energy efficiency policy framework</a></li> <li><a href="#">EECA 2024</a> has been passed</li> <li>Legally binding document: <a href="#">a guideline for energy audit reporting</a></li> </ul>
2.5	50 mins	Prof. Younsung KIM	<ul style="list-style-type: none"> <li><a href="#">ROK, PRC, RUS, CT, MAS, THA, IND</a> share their current progress on EA</li> </ul>

## (Before the workshop)

### **In order to recruit more active participants in the workshop....**

#### **Specified the background of target audiences in this workshop in GIC**

- In particular, we were interested in attendees who have years of experience working with governmental agencies, ministries, or government-related institutes responsible for formulating, implementing, or monitoring and supervising policies, regulations, and programs in **energy management and energy audits**, including energy management and audits in the industrial, governmental, commercial and residential sectors

#### **Allowed two APEC-funded participants from each APEC travel-eligible economy**

- Up to one active participant from each APEC travel-eligible economy will be funded by APEC. However, each travel-eligible economy may nominate a second APEC-funded participant, but acceptance will depend on the availability of project funds and is not guaranteed to receive APEC support fund approval. Such support will be assessed on a case-by-case basis by the APEC Secretariat. Requestors are required to provide cost quotations.

## (Before the workshop)

In order to facilitate discussion, we conducted a **Pre-Survey Questionnaire**

1. Which economy are you from?
2. What is the **current government institutional framework** of energy efficiency?
3. Are the **government and related organizations** required to implement the **EnMS and EA regularly**?
4. Is EnMS or EA a **mandatory requirement** for the **private sector** in your economy's energy efficiency law?
5. If EnMS and EA are mandatory in the private sector,
  - What is the **threshold** by energy unit/economy unit/floor area unit?
  - What kind of **requirements and obligations** of EnMS and EA ?
  - What **share of total final energy consumption** (excluding non-energy use) in your economy is **covered by Energy Management Systems and Energy Audits**?
  - How does the government **ensure the effectiveness** of the requirements?
  - What is the **compliance rate** for the requirements of EnMS and EA?
6. Are there any **voluntary and/or financial support programs** available for EnMS and EA?

## **(Before & During the Workshop)**

**In order to facilitate discussion, we also....**

**Provided the following information for each attendee three days before the workshop**

- Presentation summary (150 words) (hardcopy)
- Expert's bio (hardcopy)
- Presentation slides (shared in Google Drive)

**Showcased the discussion topic on the monitor during the relevant session**

- Discussion topics are also aligned with ["Pre-Survey Questionnaire"](#)

# 36 attendees from 12 economies and 4 APEC fora

## 12 economies

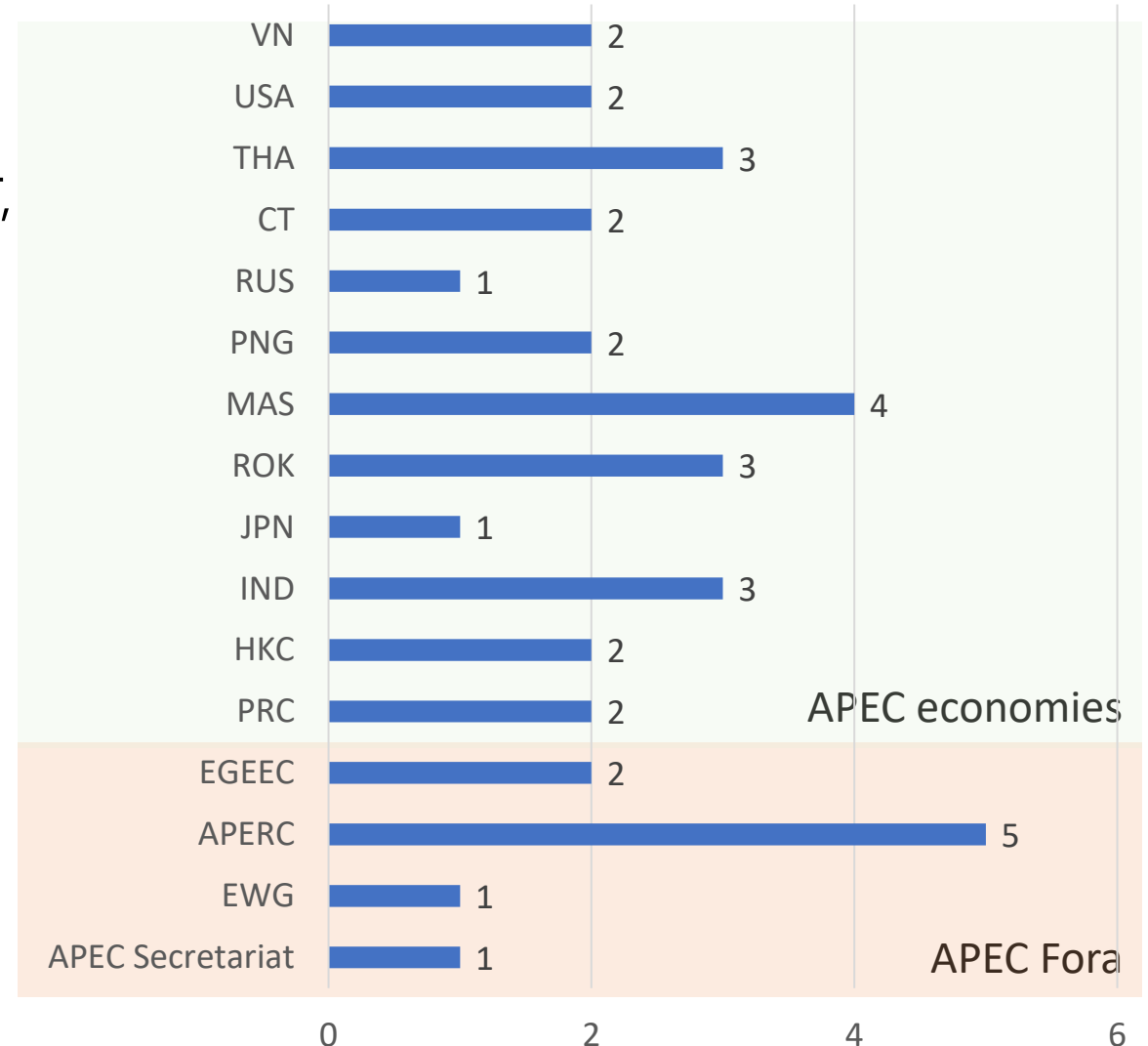
- PRC, HKC, IND, JPN, ROK, MAS, PNG, RUS, CT, THA, USA, VN

## 4 APEC fora

- EWG, APEC Secretariat, EGEEC, APERC

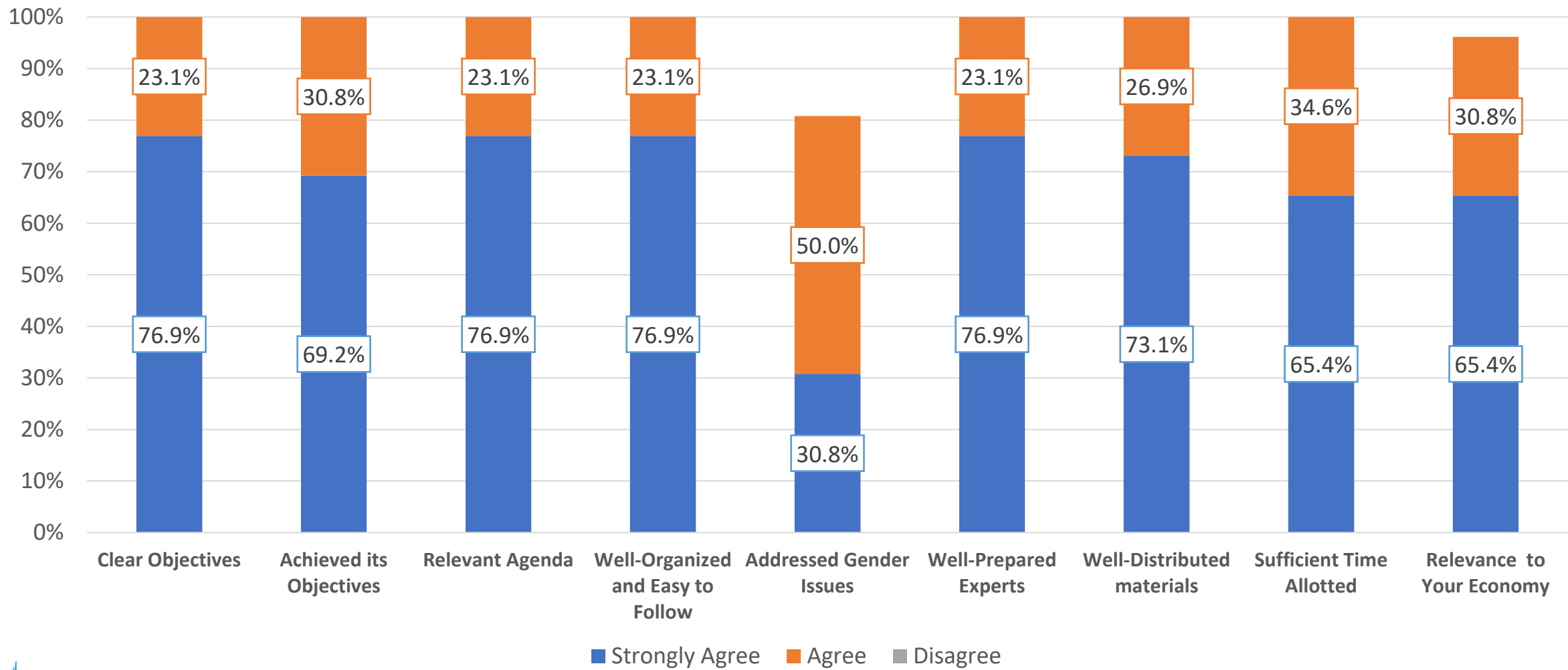
## 33.3% female participation

- 12 participants were female



# Post-evaluation Survey Result (26/36 completed survey)

Most participants strongly agree with the excellent workshop arrangement.  
However, **gender issues** should be considered in future discussion topics.





# Post-evaluation Survey Result

## What were the project's results/achievements?

- **The project effectively facilitated the sharing of knowledge from speakers in successful economies**, particularly in the areas of energy management and energy audits
- The project successfully provided exposure to all representatives of the member economies on the topics discussed

## What new skills and knowledge did you gain ?

- The knowledge sharing and presentations from various economies were highly valuable and can be used to benchmark and cross-check current practices
- Participants learnt about challenges and solutions in energy management systems and energy audits. In addition, how to encourage the private sector to comply with energy savings

## What needs to be done next by APEC?

- Build closer cooperation with related external international organizations, such as ISO/TC301
- **Future workshops on other related topics:** financial mechanisms and incentives, Energy service companies (ESCOs) 2.0, digitalization, retrofit-commissioning, industrial energy audits, etc.

# Workshop Photo





# Thank you

<https://aperc.or.jp>

