

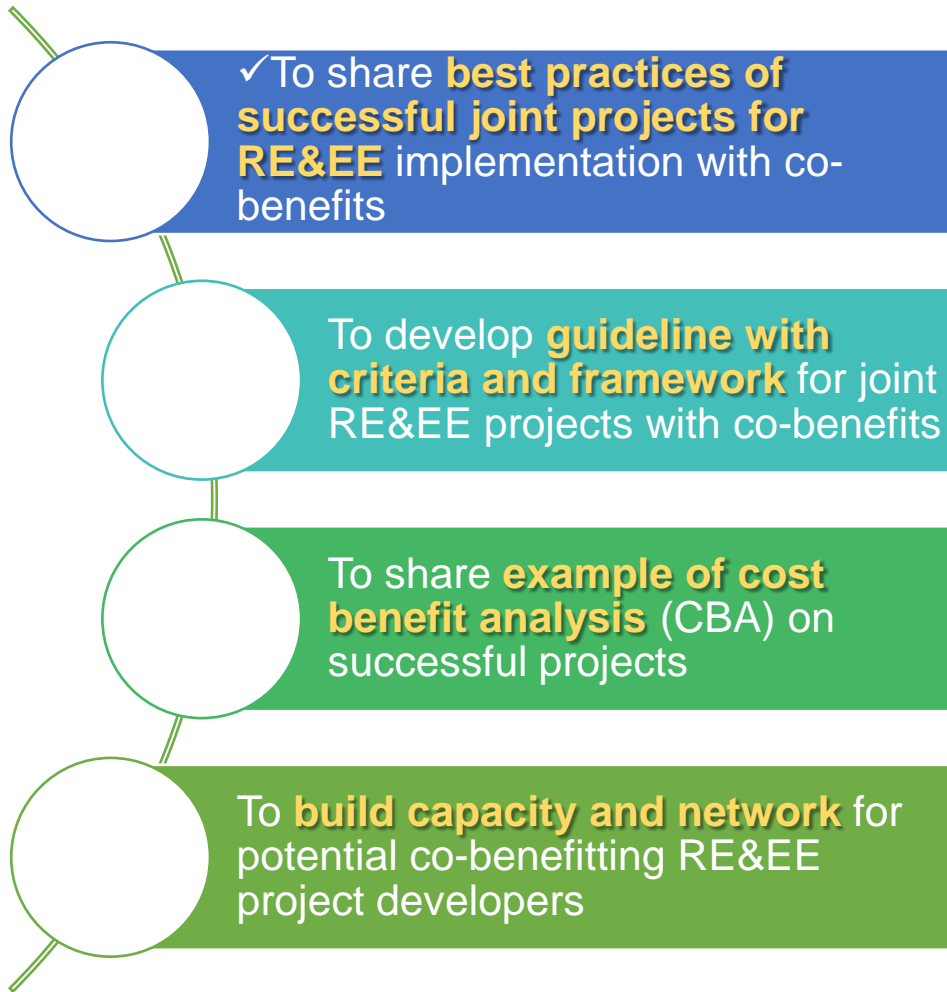
EWG 04 2019A: Exploring Co-Benefit Opportunities for **Renewable Energy and Energy Efficiency** Projects in the APEC Region

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APEC 58th EGEE&C Meeting (virtual)

31 March 2022

Objectives



Duration: Aug 2019 – Oct 2021 (after extension)

Contractor:



Co-sponsoring Economies

People’s Republic of China | Japan | Republic of Korea | Malaysia | The Philippines | Chinese Taipei | The United States

Summary of the Progress

✓ **Key success factors extracted** from successful RE&EE projects & policy criteria in APEC

Progress Report 1&2 submitted

WS1 (virtual-hybrid on 18-19 Mar 2021) & WS2 (virtual on 19-20 Jul 2021) successfully held

Technical criteria for RE&EE co-benefit finalized through Eligibility-Priority-Scoring APEC proposal evaluation

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APEC
Energy
Goals

- EE: 45% energy intensity reduction by 2035
 - RE: Doubling the share of renewable energy by 2030
- EE goal can be easily achieved while further efforts are needed for the RE goal**



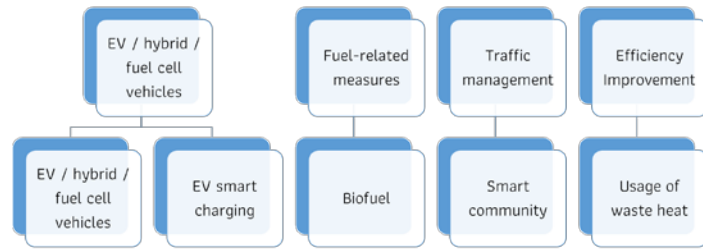
- There are past projects/activities aiming to achieve EE goal, that have contributed to RE goal.
- If support is given to such projects/activities, it will be **easier to achieve RE goal**, and can potentially **save cost for RE investment**

Literature review of past projects/activities co-benefitting RE&EE (19 reports)



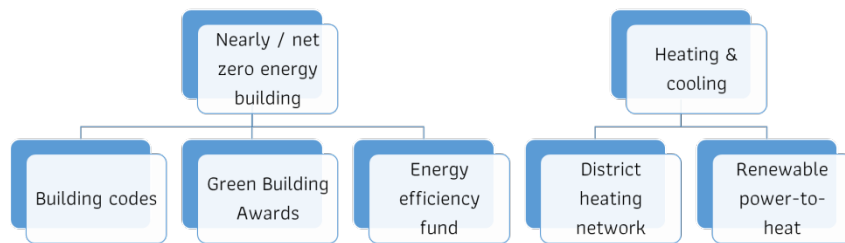
Key success factors

Transportation sector



Power sector

Building sector



There are several areas in each sectors where **projects fulfilling EE goal can also contribute to RE goal**

- **Important keywords** in the review of projects and activities co-benefitting RE&EE are extracted
 - These are **technical characteristics** that potentially lead to increase in share of renewable energy and decrease in energy intensity
- They are categorized and ranked based on frequency of observation in the reports

No.	Category
1	Flattening peak demand
2	Low carbon
3	Digital
4	Electricity/ electrification
5	Cost effectiveness
6	Fuel standards
7	Local context
8	Sustainability

Some of them are already in APEC quality criteria.



Need to find ways to include these keywords into consideration of future APEC project

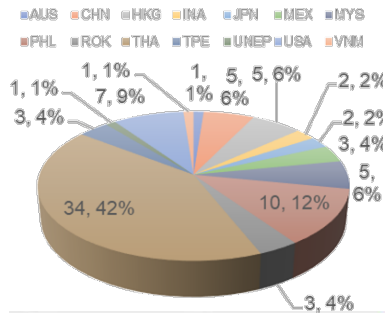
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Workshop 1

82 participants from 13 Economies (27 female: 55 male)

Findings & Conclusions

- Experience shared by top runners confirmed **opportunities in project designing and successful implementation** of projects co-benefitting RE&EE.
- Key success factors and technical criteria for RE&EE co-benefit confirmed.



Proposal of Technical criteria for RE&EE Co-Benefit

- **Slight modification of eligibility criteria:** To be eligible projects must:
 - ✓ Focus on activities which will contribute to achieving APEC's aggregate **energy intensity reduction goal of 45%** by 2035 which was agreed at the APEC Leaders Meeting in Honolulu in 2011; **and/or**
 - ✓ Focus on activities which contribute to achieving to goal of **doubling the share of renewables** by 2030 which was endorsed by the APEC Leaders Meeting in Beijing in 2014;
- **Addition to priority:** Projects on Low-Carbon Model Town (LCMT) or **Projects that support both RE&EE APEC goals** through at least two of following 6 technical criteria will be funded first:
 - (1) **Flattening peak demand**, (2) **Low carbon**, (3) **Digital**, (4) **Electricity / Electrification**, (5) **Fuel standards**, (6) **Local context**
- **Additional consideration for scoring:** Proposed technical criteria can be consider for **scoring of Criteria 1** (Supports the priorities of the APEC Fund to which it is applying).

Cooperation between RE&EE experts

- Support draft criteria for APEC RE&EE project evaluation to **achieve APEC RE&EE goals**

WS records available at

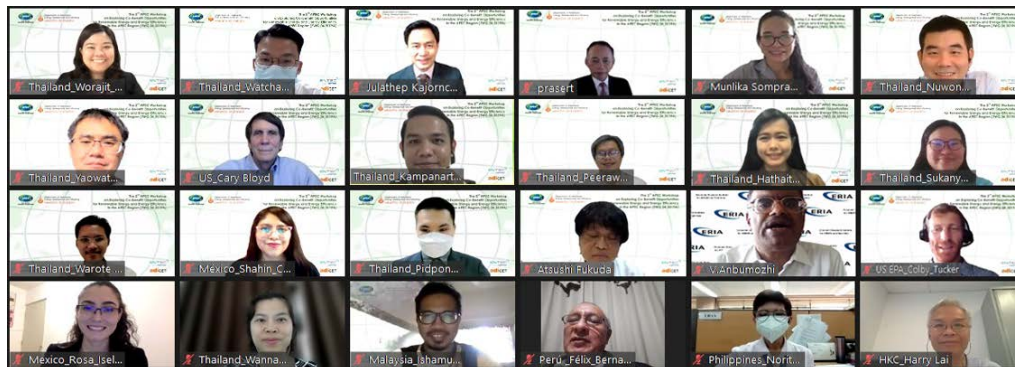
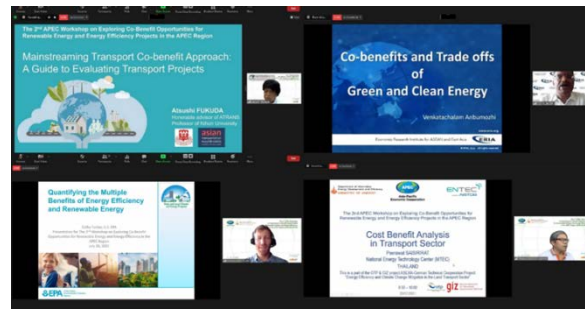
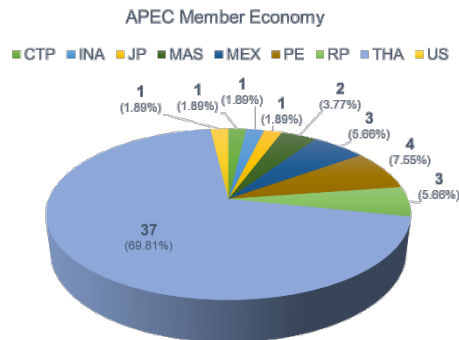
<https://www.facebook.com/mtecnstda/videos/845546132844307> and <https://www.facebook.com/mtecnstda/videos/236199754860988>

Workshop 2

53 participants from 9 Economies (20 female: 33 male)

Findings & Conclusions

- **Criteria, framework and evaluation tool** to assess co-benefitting projects in transportation sector reviewed & discussed with **hand-on practice** capacity building in transportation sector
- 3 RE&EE **Co-benefit assessment tools** were shared by EPA, IGES & ERIA



Refinement of Technical criteria for RE&EE Co-Benefit & Hand-on practice

- **RE&EE Co-benefit assessment tools** were shared by
 - ✓ **EPA**: quantifying **multiple benefits** (enhancing electricity system, reducing emission and improving health, and boosting economy) via **analytical framework** (1-determining scope and strategy, 2-determining direct electricity impacts, 3-quantifying multiple benefits from direct electricity benefits, 4) using benefit information to support informed decision-making.
 - ✓ **IGES**: emphasizing **evaluation guideline** for clean transport project investment on 1-necessity in preparing **emission factors** and 2-necessity in determining a **proper price** for greenhouse gas emission.
 - ✓ **ERIA**: addressing **triple challenges** (1-accelerating economics growths, 2-enhancing energy and human security and 3-reducing pollutions and emissions) with **mechanisms** (harnessing carbon market, increasing tax revenues, openness to trade and investment in green goods and services, and energy connectivity)
- **Hand-on practice** for capacity building in transportation sector via Microsoft Excel-based Fuel Economy Policy Implementation Tool (FEPIT) of the International Energy Agency (IEA)

Future Work

- **Final report submission by 31 October** with proposed suggestion on technical criteria for RE&EE Co-Benefit

Cooperation between RE&EE experts

- Support draft criteria for APEC RE&EE project evaluation to **achieve APEC RE&EE goals** with linkage to **carbon neutral** trend

WS records available at

<https://www.facebook.com/mtecnstda/videos/534900737632773> and

<https://www.facebook.com/mtecnstda/videos/310301564211211>

Way Forward

✓ Propose **criteria**, framework and evaluation tool to assess **co-benefitting projects** in power generation and distribution, transport, and buildings sectors.

Suggest **driving mechanisms and enabling policies** for the joint RE&EE projects.

✓ Emphasize value from co-benefits of renewable energy and energy efficiency as an explicit potential beyond direct benefits.

Expand to carbon neutral proposal.

- Financial supports/incentives,
- Standards and regulations,
- Stakeholder engagement,
- Self-funded or industrial-led initiatives (Thailand carbon market, <http://carbonmarket.tgo.or.th/>).
- In particular, policies that aimed to promote EE could also benefit the improvement of RE, and vice versa.

Great appreciation for
co-sponsoring Economies

People's Republic of China | Japan | Republic of Korea |
Malaysia | The Philippines | Chinese Taipei | The United States

[Seeking Endorsement] Draft Final Report on APEC Workshop on Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region (EWG 04 2019A)

Takuo Miyazaki <tm@apec.org> Tue, Mar 22, 2022 at 5:29 PM
To: Takuo Miyazaki <tm@apec.org>
Cc: "nuwong.cho@gmail.com" <nuwong.cho@gmail.com>, มัลลิกา สมพรานนท์ <munlika_s@dede.go.th>, sompranon munlika <sompranon.munlika@gmail.com>, "Ms. Munlika Sompranon" <mu21bm@hotmail.com>, Dainealya Mohd Abdul Wahab <dmaw@apec.org>

(This email is sent on a BCC basis)

Dear EWG Members,

On behalf of Thailand EWG 04 2019A Project Overseer, we are circulating to you the draft Final Report of "APEC Workshop on Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region (EWG 04 2019A)" for members' review and endorsement.

The 1st and 2nd APEC Workshop on Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region (EWG 04 2019A), initiated by Department of Alternative Development Energy Development and Efficiency, Ministry of Energy, Thailand, were held in a hybrid and virtual mode on March 18-19, 2021 and July 19-20, 2021, respectively. After both workshops, the related deliverables - Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region Report (The Final Report) was prepared and now the report is circulated as attached for EWG review and endorsement.

Members are kindly requested to send your comments, if any, to the Project Overseer Mr Watcharin Boonyarit (munlika_s@dede.go.th and nuwong.cho@entec.or.th) and copy to APEC Secretariat (tm@apec.org & dmaw@apec.org) by **Monday, March 28th, 2022**. In the absence of no adverse comments by the noted deadline, the report will be considered endorsed by the EWG and will be uploaded to the website of APEC (publication section).

- Currently seeking for endorsement on draft final report from EWG members

(Re-circulation) [Seeking Endorsement] Draft Final Report on APEC Workshop on Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region (EWG 04 2019A)

Takuo Miyazaki <tm@apec.org> Wed, Mar 23, 2022 at 2:49 PM
To: Takuo Miyazaki <tm@apec.org>
Cc: "nuwong.cho@gmail.com" <nuwong.cho@gmail.com>, มัลลิกา สมพรานนท์ <munlika_s@dede.go.th>, sompranon munlika <sompranon.munlika@gmail.com>, "Ms. Munlika Sompranon" <mu21bm@hotmail.com>, Dainealya Mohd Abdul Wahab <dmaw@apec.org>

(This email is sent on a BCC basis)

Dear EWG Members,

We re-circulate the draft Final Report for those members who were not able to receive it through the previous email below due to exceeding the file size that is receivable under their e-mailing systems.

Members are kindly requested to send your comments, if any, to the Project Overseer Mr Watcharin Boonyarit (munlika_s@dede.go.th and nuwong.cho@entec.or.th) and copy to APEC Secretariat (tm@apec.org & dmaw@apec.org) by **Monday, March 28th, 2022**. In the absence of no adverse comments by the noted deadline, the report will be considered endorsed by the EWG and will be uploaded to the website of APEC (publication section).

Best regards,

Takuo MIYAZAKI (Mr)

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