



Asia-Pacific
Economic Cooperation



Department of Alternative
Energy Development and Efficiency
MINISTRY OF ENERGY

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

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APEC 55th EGNRET & 56th EGEEC Joint Meeting (virtual)

13 May 2021



EWG 04 2019A: Exploring Co-Benefit for RE&EE

• Objectives

- To share **best practices of successful joint projects for RE&EE** implementation with co-benefit in power generation and distribution, transport, and buildings sector
- To **develop guideline with criteria and framework** for joint RE&EE projects with co-benefit technically and economically
- To share **example of cost benefit analysis (CBA)** on successful projects (e.g. RE&EE in transport sector - EV & biofuel)
- To **build capacity and network** for co-benefitting project developers in designing, planning and assessing potential RE&EE joint project

• Duration

- August 2019 – October 2021 (after extension)

• Contractor

- National Energy Technology Center (ENTEC)

• Co-sponsoring Economies

- China; Chinese Taipei; Japan; Malaysia; Philippines; Republic of Korea; USA

• Summary of the Progress

- **Key success factors extracted** from successful RE&EE projects & policy criteria in APEC
- Progress Report 1 submitted
- WS1 organized (virtual-hybrid) on 18-19 Mar 2021
- **Technical criteria for RE&EE co-benefit proposed** through Eligibility-Priority-Scoring APEC proposal evaluation

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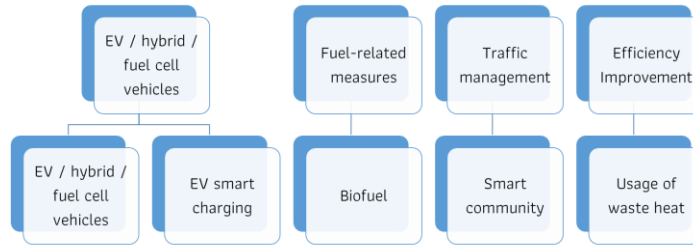
APEC Energy Goals

- 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**

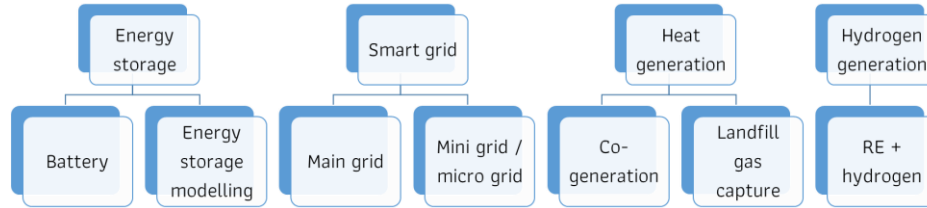
- There are past projects/activities aiming to achieve EE goal, that have contributed to RE goal.
- If support is given to such projects/activities, it will be **easier to achieve RE goal**, and can potentially **save cost for RE investment**

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

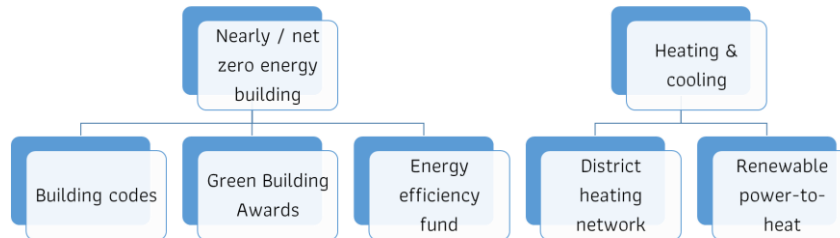
Transportation sector



Power sector



Building sector



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

Key success factors

- **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.

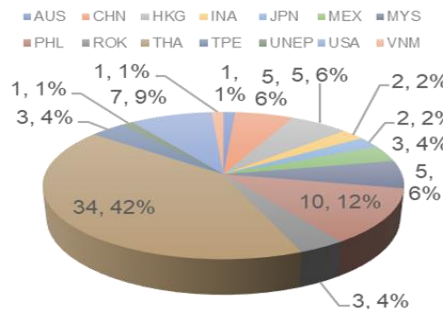
Need to find ways to include these keywords into consideration of future APEC project

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; and
 - ...
- 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).

Future Work

- WS2 planned (virtual) for **Jul 2021** for capacity building in RE&EE project developers

Cooperation between RE&EE experts

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