



Training on “Dynamic Investment Grade Calculation”

19-21 January '16, Bangkok



On behalf of:



of the Federal Republic of Germany



- Objective:
Support the implementation of the Thai Energy Efficiency Development Plan
..... based on enhancing incentives and standards which will have a direct impact on CO₂ emission reduction
- Duration:
3.5 years (2012-2016)
- Financier:
The German Ministry for Environment, Nature Conservation and Nuclear Safety



- Main project partners:
 - Ministry of Energy, Energy Policy and Planning Office (**EPPO**)
 - Deutsche Gesellschaft für Internationale Zusammenarbeit (**GIZ**)
- Other project partners:
 - Thailand Greenhouse Gas Management Organization (**TGO**)
 - The Department of Alternative Energy Development and Efficiency (**DEDE**)
- National Project Supporting Partner:
 - Joint Graduate School of Energy and Environment (**JGSEE**), KMUTT
- International project supporting partner:
 - Wuppertal Institute (**WI**), Germany

1

Energy Efficiency Indicators (EEI)

- ❖ Energy data analysis
- ❖ Technical training for statistical officer

Output/Outcome

- EEI development by economic sub-sector report
- Spreadsheet with database & User's guideline

2

Energy Efficiency Resource Standards (EERS)

- ❖ To introduce & review EERS for utilities

Output/Outcome

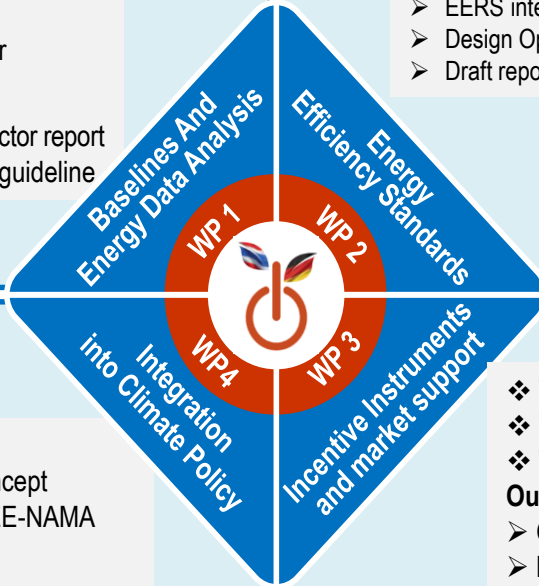
- EERS international best practice report
- Design Options guideline for Thailand
- Draft report of 'EERS Pilot Project for school'

Building Energy Code (BEC)

- ❖ To support in developing a timeline of gradually tightening of BEC

Output/Outcome

- Recommendations report on tightening the BEC requirements (OTTV,RTTV and LPD) based on labeling scheme
- BEC Database and monitoring tool



Energy Efficiency NAMAs

Capacity Building

- ❖ To introduce NAMA & MRV concept as well as selected criteria for EE-NAMA

Output/Outcome

- NAMA & MRV concept report

Domestically Supported NAMA → BEC

- ❖ To develop measure-based MRV system

Output/Outcome

- Recommendations/ Guideline of M&E for BEC

Internationally Supported NAMA

- ❖ To develop draft NAMA proposal to NAMA registry and international funding

Output/Outcome

- Draft ESCO-NAMA proposal 'Financial mechanism for supporting ESCO market in Thailand' cooperating with ECN

Building Energy Code (BEC)

- ❖ To develop energy labeling on BEC standard
- ❖ To develop a financial tool to support higher energy efficient building
- ❖ To develop guidebook for high EE buildings architectural design

Output/Outcome

- Guideline for elevating BEC by EE labeling
- Report on financial incentive to support higher energy efficient building
- Guidebooks for high EE buildings architectural design

Standard Offer Programme (SOP)

- ❖ To develop M&V for supporting SOP pilot project

Output/Outcome

- SOP pilot project guideline (based on the study of KMUTT for EPPO)

SEC Benchmarking

- ❖ To review international SEC benchmarking
- ❖ To compare SEC available in Thailand to international (eq. cement, steel)

Output/Outcome

- Thailand-International SEC benchmarking

ESCO

- ❖ ESCO intensive training program
- ❖ ESCO facilitation approach pilot project

Output/Outcome

- Strengthen Thai ESCOs Market
- ESCO facilitation guideline

4

3

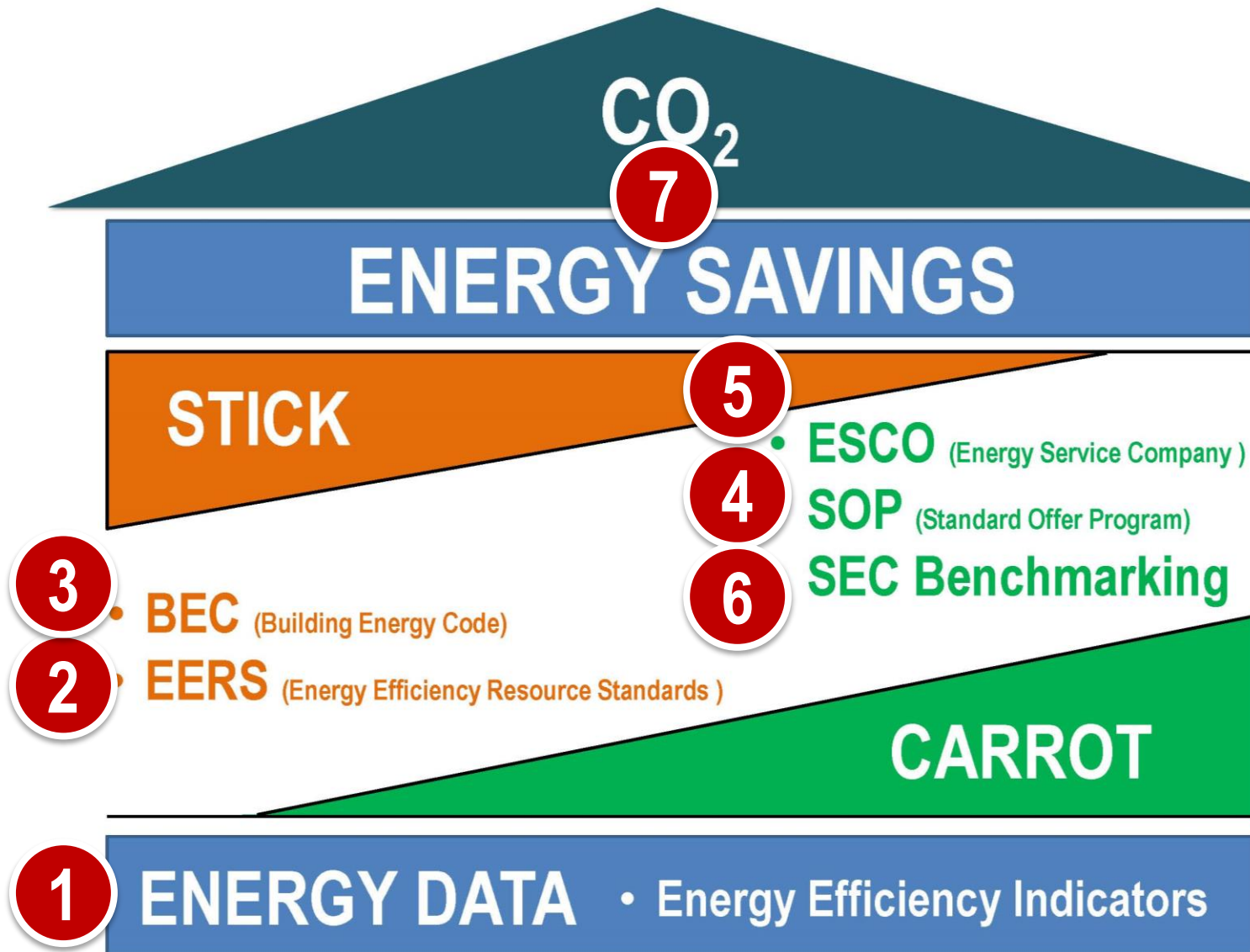
WP 0 International Know-how Transfer Information

Ex-ante Evaluation of EEDP

- To assess the benefits that may be achieved through implementation of the EEDP
- EX-ante Evaluation of EEDP Report

Capacity Building & Training

- Results-based Management (RBM) Training
- EE- Study Trip 2014 "EE Policy in Building & Industrial sector"; Denmark and Germany
- Monitoring and Evaluation of Energy Efficiency Policies • Prezi Presentation





- Study of international and **Thai ESCO market and recommendations** to Thailand (Jan. '14);
- Fact-finding mission and organisation of **seminar on facilitation approach for ESCO projects** (June '14)
- **Intensive ESCO training** (EPC, financing, risk management, M&V, etc.) for the Thai ESCO Association members (July '14)
- **Pilot project:** ESCO project in SME industry, using **Facilitation Approach**
- **MoU with EGAT and PEA** on ESCO Facilitation Approach
- **Facilitation Approach training** (Nov '15)



- **Lack of understanding** of ESCO concept, among potential clients as well as financial institutions
- **Lack of confidence and trust** among actors in ESCO market
- **Difficult access to finance:** although ESCO Fund tries to address this issue, e.g. credit guarantee did not deliver; financial institutions did not acknowledge ESCO Fund guarantee and asked deposit of size of investment
- Room for **improvement of M&V systems**
- **Public sector access** is hindered by legal tender and finance conditions



- **Create market demand** for energy services in the public sector (e.g. support to revision of procurement rules)
- **Develop supporting schemes for market facilitators** or EPC consultant (e.g. EE consulting companies, energy agencies, trade associations, etc.);
- Further **expand knowledge** on developing EPC and bankable ESCO projects
- **Design future energy efficiency policy** instruments (e.g. SOP, EERS) in a way that allows ESCOs to participate in order **to stimulate the energy service market.**
- Explore and discuss **improved access to finance** for ESCO's

Objectives

- To expand knowledge on developing and calculating complex ESCO projects
- To share and learn to use a detailed ESCO calculation tool
- To improve skills for reporting to management, banks and other stakeholders



<http://www.thai-german-cooperation.info/energy-efficiency-plan.html>

Thank You – Kop Khun Kah – Danke Schön