



MitigationMomentum

ESCO Market Study

Presented at the

Roundtable Workshop

“Financial mechanisms to transform the ESCO market in Thailand: Discussion of the NAMA proposal”

Thursday 25th June 2015

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Outline

- Aim of the study
- Resources
- Thai ESCO Market
- Barrier Analysis
 - Barrier 1: Quality of the ESCO Market
 - Barrier 2: Lack of trust among stakeholders
 - Barrier 3: Lack of upfront capital
- Customer growth potential
- Implications for the NAMA proposal

impact

increased investments in energy conservation, energy and cost savings, increased productivity, and GHG mitigation

outcome

Increase in ESCO investments due to:

- Improved conditions for ESCOs to attract finance
- Improved capability for EPC
- Increased trust among end-users, banks, and ESCOs

Thriving ESCO market due to:

- Improved access to capital for EE investments
- More and better EE investment proposals

outputs

- Better understanding of different ESCO business models (govt and ESCOs)
- Advise on technical and financial aspects of EE investments (Govt and ESCOs)

- “Facilitation Approach” further elaborated and applied in different segments

- Access to loan guarantees for implementation (ESCOs)
- Access to grants for project development (ESCOs)
- Better understanding of financial aspects of EE investments (Banks)

activities

- A1: Needs assessment and capacity building (Govt)
- A2: Needs assessment and capacity building (Thai ESCO association and ESCO companies)
- A3: Setting up technical assistance facilities

- B1: Develop business cases for EE-ESCO transaction and MRV with facilitation approach
- B2: Develop business cases for EE-ESCO transaction and MRV with facilitation approach
- B3: Develop business cases for EE-ESCO transaction and MRV with facilitation approach

- C1: Establish Portfolio Guarantee
- C2: Establish Grant scheme for developing a project pipeline
- C3: Setting up advisory services for financial sector institutions

Input from the ESCO Market Study

inputs

Government of Thailand policies and strategies

International funding for: Technical support, and Financial support

Aim of the Study



Resources used

- ADB, 2013. Research on ESCOs in Southeast Asia
- Clinton Foundation, 2011. BMA research on commercial buildings for World Bank CTF
- DEDE, 2015. **ESCO Market Survey.**
- ECN, 2015. **Survey ESCOs and ESCO Customers April 2015** (ECN)
- FTI, 2013. **ESCO Market Report**
- ReExCapital, 2010. – Energy Efficiency Potential in Southeast Asia



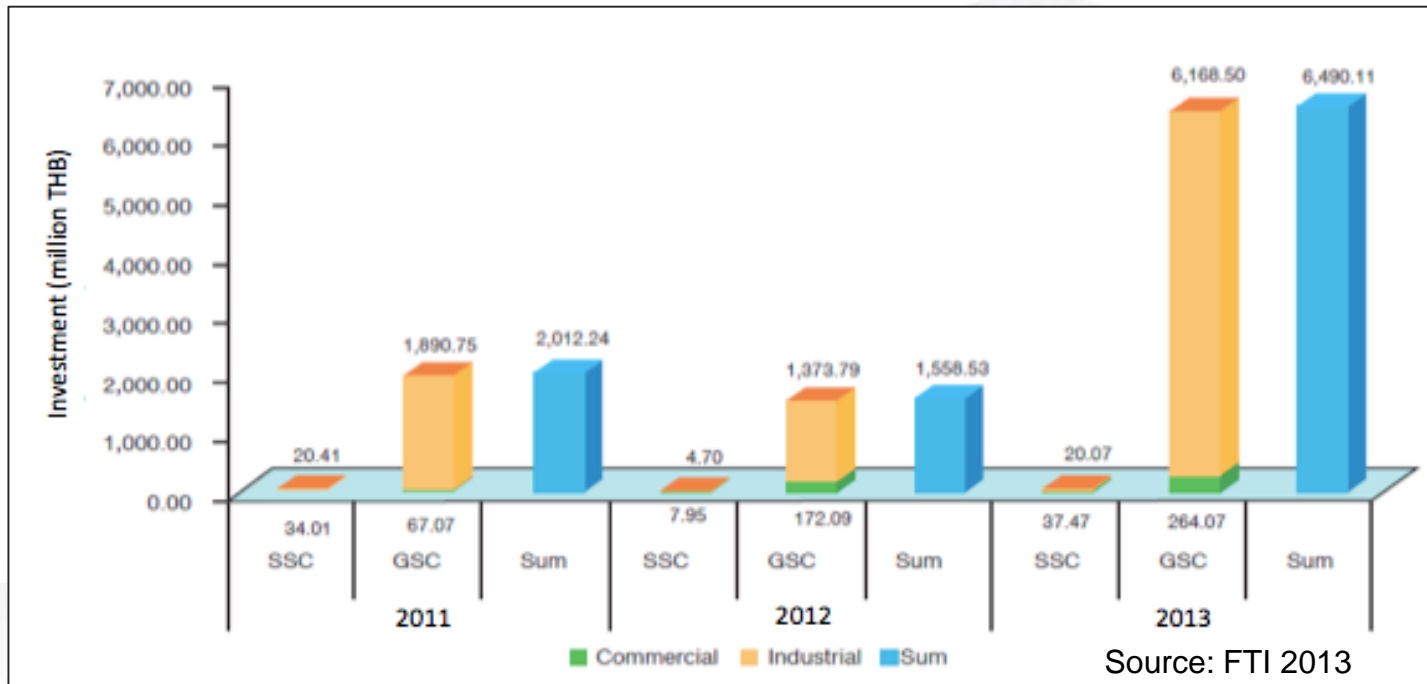
Thai ESCO Market

Definition (FTI):

*‘An ESCO is a company which **provides energy efficiency and/or renewable energy-related services** including project consulting, project development and management, technical design, energy audits, equipment installation, and project implementation and financing for energy savings and/or renewable energy project. **Services offered by an ESCO are guaranteed by energy performance contracts** in which methods for the measurement and verification of savings are defined. ‘*

Thai ESCO Market

Current investment: 80-150Mio US\$ a year



Customers:

- **Industry:** 199 projects; 61 Mio US\$ vs.;
- **Commercial sector:** 138 projects; 6.1 Mio US\$

Thai ESCO Market – Public support



- **Host agency:** DEDE
- **Facilitators:**
Institute of Industrial Energy; Thai ESCO association; BOI
- **International support:**
GIZ-TGPEEDP
Afd -K-Bank

Measures:

- ESCO fund
- Tax incentives
- Background studies
- Training
- Network development



Barrier 1: Quality of the ESCO Market



- Variable definition
- Small number of Thai and international ESCOs
- ESCO market dominated by “fee-for-service” rather than EPC
- Small market share

Barrier 2: Lack of trust



Research:

- Technology provider or ESCO company
- ESCO fund complaints of mistrust

Survey results:

- 50% mistrust of customers
- ESCO instruments misused



Barrier 3: Access to capital



- Energy services and guarantee contracts dominate
- Limited ESCO finance

ESCO Fund:

- ESCOs not primary beneficiaries
- So far only EE leasing
- Limited uptake

Customer Growth Potential: Industry



- Composition : 80-90% SMEs

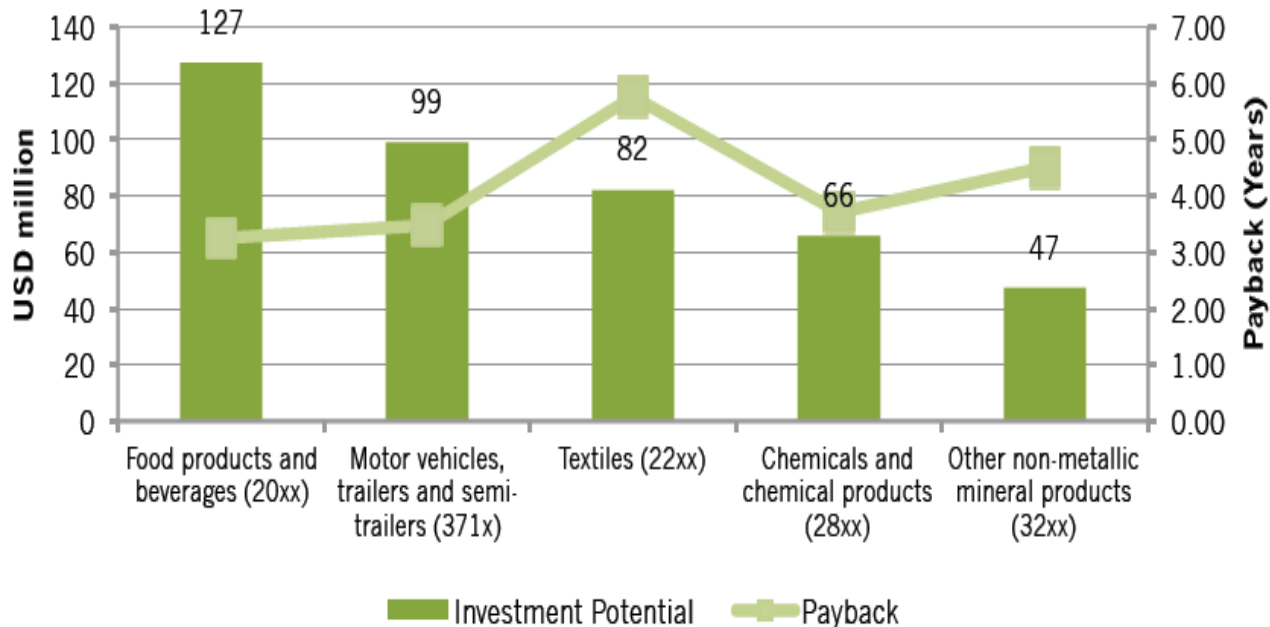


Figure: Top 5 industries by investment potential (ReExCapital Asia 2011)

- EE Investment potential 2010: 417 Mio US\$ (ReExCapitAsia20011)

Customer Growth Potential: Commercial buildings

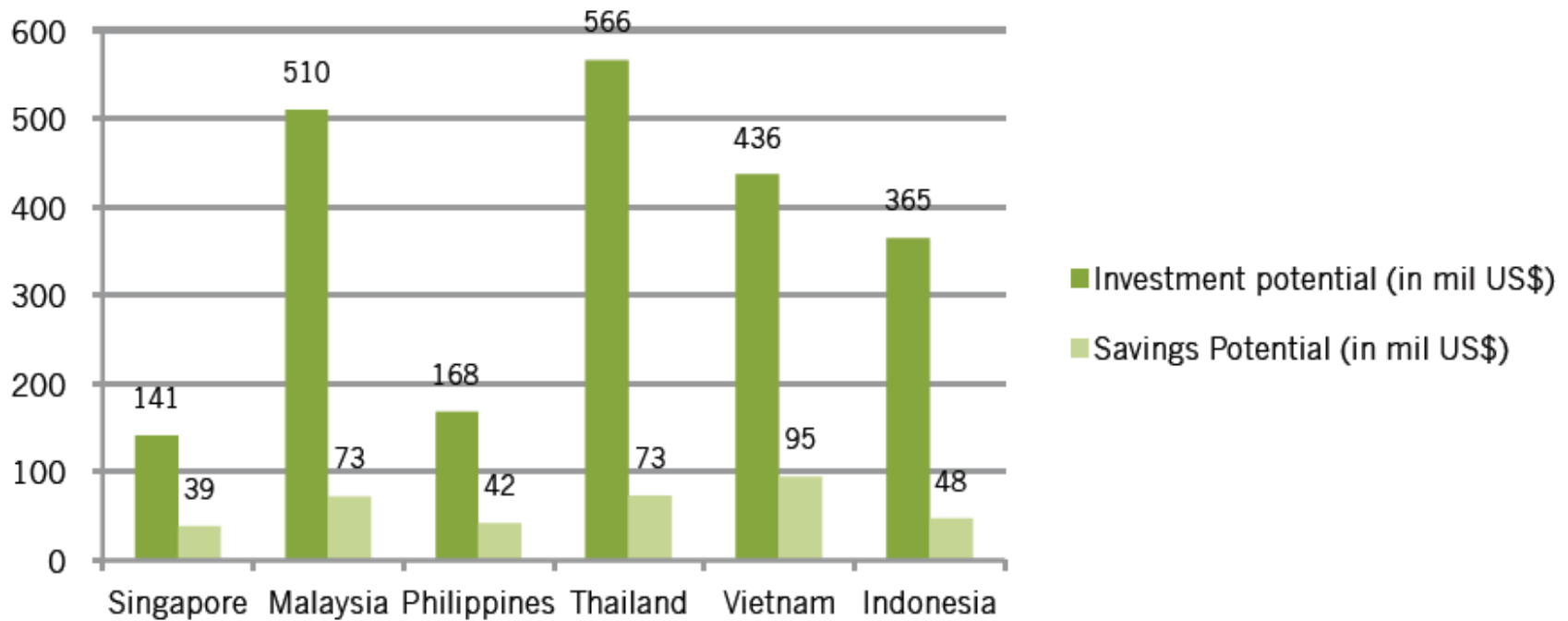


Figure : Hotels: Investment and Saving Potential (million US\$) (ReExCapitalAsia, 2010)

Investment Potential: 706 Mio US\$

Customer Growth Potential: Public and Residential Sector



Public buildings

- 5% of Electricity consumption
- High: hospital, universities
low: schools
- **Legislation needs to change**

Residential

- Low energy intensity
- Disbursed customers
- Split incentives
- Decentralised systems
- Potential in service apartments



Implications for the NAMA proposal



Quality of the ESCOs

- Quality assurance system
- Contract Standardisation
- Trainings

Trust is created

- “Facilitation Approach”
 - ESCO - customer
 - ESCO – financial institutions

Access to Finance

- Guarantee mechanism
- Grants for project development (ESCOs)
- Technical facility for Banks

Implications for the NAMA: Market transformation

**Doubling the ESCO market investments
from US\$ 150 to 300 million by 2020 (over 5 y.)**

- From 300 to 2000 projects
- From 50 to 200 ESCOs.
- Project size between 300-500.000 US\$



Energy Savings and Greenhouse gas reduction

- Energy savings from 2020 onwards:
 - 2000 - 4000 GWh/year
 - 217 – 435 Mio US\$/year
- CO₂ reduction: 1.1 – 2.2 Mton CO₂eq. annually from 2020 onwards

Question and Answers



Thank
you!