

# Lessons learned from 35 years of Energy Efficiency Finance support in Thailand

THINK.  
CHANGE.  
DO

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# Why Energy Efficiency Finance is important?



- SEA high Energy efficiency potential
- Major Barrier: Access to capital
- Private sector opportunity



- Small investments
- 'invisible resource'
- Multiple stakeholders



- Models range from grants to risk reducing mechanisms
- Limited knowledge

# Background - Scope of the research

## Method

Case study in Thailand

## Data



Organisation	#	Organisation	#
Academia	4	Government	8
Financial institutions	7	International	7
Customer	3	Independent Consultants	8
Energy service providers	7	ESCOs	4
TOTAL	21		26
Grand Total: 47			

# Key learnings



## What has Worked?

- Clear EE targets and regulations
- Revolving funds (loans and leasing)
- Tax incentives or grant programs

## What has Not Worked?

- Capacity building of financial institutions
- De-risking measures
- Energy efficiency and renewable energy together
- Pipeline development

# Energy Efficiency Finance Business Models - Traditional

Traditional	Benefits/Challenges	Public support	Thailand
<ul style="list-style-type: none"> <li>▪ <b>Internal Finance</b> Large, Medium, MUSH, gov.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>No interest rates</u></li> <li>▪ Capital available</li> <li>▪ Return on Investment</li> <li>▪ Hassle factor</li> <li>▪ Management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Subsidy programme</li> <li>▪ Free audits</li> <li>▪ Tax exemptions</li> </ul>	 <p>20-80 Des.ind. Tax benefits</p>
<ul style="list-style-type: none"> <li>▪ <b>Loans</b> Large, medium</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Not to use own finance</u></li> <li>▪ Convince board to invest</li> <li>▪ Requires collateral</li> <li>▪ Minimum amount high (10 – 20 Mio THB)</li> <li>▪ On- balance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Subsidise credit line</li> <li>▪ Funds</li> </ul>	 <p>EERF ESCO Fund Tech. support. For investors</p>
<ul style="list-style-type: none"> <li>▪ <b>Leasing</b> Medium, SMEs, Gov.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Contract over period of years</u></li> <li>▪ <u>Smaller amounts possible</u></li> <li>▪ Higher costs</li> <li>▪ Off-Balance investment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Facilitation</li> <li>▪ Revolving funds</li> </ul>	 <p>ESCO Fund Two companies</p>

# Energy Efficiency Finance Business Models – innovative options

Innovative	Benefits/Challenges	Public support	Thailand
<b>Energy Performance Contracts</b> <ul style="list-style-type: none"> <li>▪ <b>Guaranteed Savings</b></li> <li>▪ <b>Shared Savings</b></li> <li>▪ <b>Utility based programmes</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Contracts that last for the pay back time period</li> <li>▪ Quality insurance of the ESCO</li> <li>▪ Dependant on public support</li> <li>▪ Projects need to be a certain size</li> <li>▪ Off-balance</li> <li>▪ ESCO needs capital</li> <li>▪ Mainly focused on residential sector</li> <li>▪ Procurement regulation</li> <li>▪ Strong gov. commitment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Registration of ESCO</li> <li>▪ Standardisation of contracts</li> <li>▪ Employ facilitators</li> <li>▪ Guarantee mechanism for technical failure</li> <li>▪ Guarantee mechanism</li> <li>▪ Energy Efficiency Resource Standards (Energy savings obligation)</li> <li>▪ Assist to establish Super ESCO (under PEA)</li> </ul>	<ul style="list-style-type: none"> <li>▪ ESCO Fund</li> <li>▪ Promotion via FTI and DEDE</li> <li>▪ MEA and PEA EE programs</li> </ul>

# Useful references

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# Questions/ Feedback

Thank you!