Thai ESCO Association
สมาคมบริษัทจัดการพลังงานไทย

ESCO Business

23 MAY 2018

ESCO as a suitable solution

ESCO

Energy Service COmpany

“ An energy service company (acronym: ESCO or ESCo) is a commercial business providing a broad range of comprehensive energy solutions including designs and implementation of energy savings projects, energy conservation, energy infrastructure outsourcing, power generation and energy supply, arrange financing for projects and risk management for which performance contract and measurement and verification is a core part to ensure that the project technical performance is fully guaranteed during the contract period”

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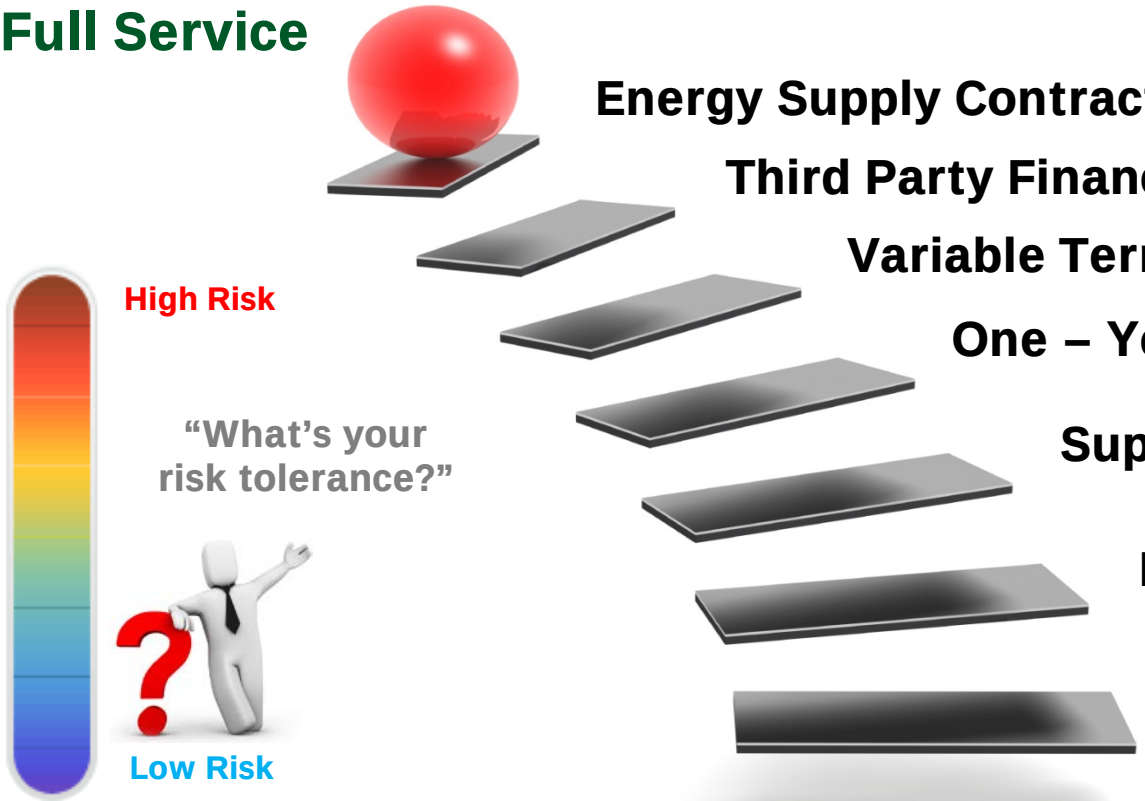
Range of ESCO Business Services

ESCO's Full Service



Energy Supply Contracting

Third Party Financing

Variable Term Contracts

One – Year Contracts

Supplier Credit

Equipment Leasing

Consultant with Performance Base Payment

Consultant with Fixed Payment

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ESCO's characteristics

What

.....is important characteristics of an ESCO

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ESCO's characteristics

Various definition & Wide range of services

When comparing or take figure about ESCO's number into consideration

ESCO offers:

M : Measurement & Verification
I : Integration through O&M
G : Guarantee

Financing is **NOT** considered as a key characteristic.

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M : Measurement & Verification (M&V)

M&V Concepts:

- Base on international standard protocol
- Flexible
- Optimization

The protocol to determine Energy Savings

Measurement and Verification System

M&V

Feedback to increase energy savings in the future

Verify Energy Conservation Measure (ECM) continues to perform and generate energy savings

Guideline for M&V

☑ **IPMVP** (International Performance Measurement and Verification Protocol) (http://www.ipmvp.org)

☑ **FEMP** (Federal Energy Management Program of the U.S. Department of Energy) (http://www.eren.doe.gov/femp/financing/espc/measguide.html)

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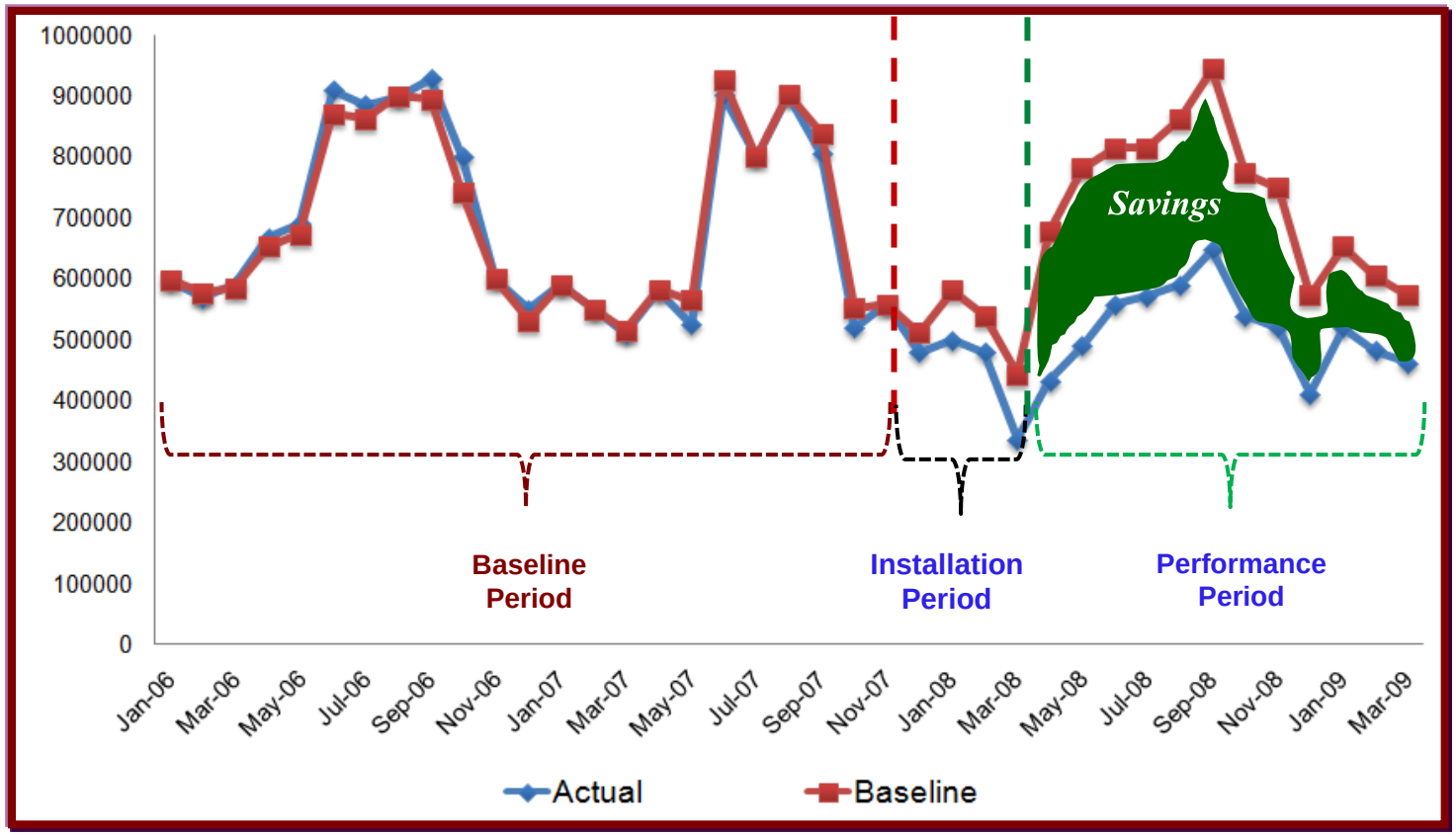
M : Measurement & Verification (M&V)



Higher Efficiency, More Reliable, Less Pollutions

Less Energy Consumption, Less Energy Expense , Less $$$

Energy Savings = Baseline Energy Use - Post Installation Use

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I : Integration through O & M

Additional ESCO Services

Providing or Arranging Financing

Operations and Maintenance

Training

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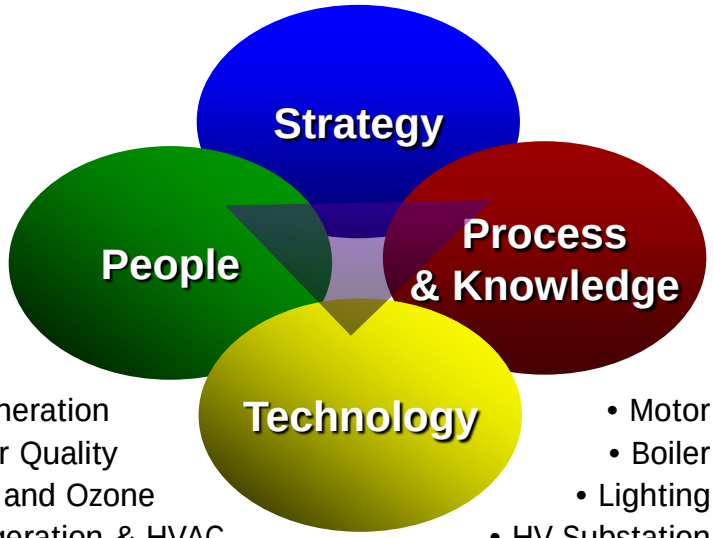
G : Guarantee

To successfully discover the value of ESCO business and ultimately deliver the value to client and country, an ESCO company needs to commit to the **Strategy** and drive it through the development of **People**, **Process**, and **Technology**.

- **Client Strategy** – Relationship & Trust
- **Market Strategy** – Shotgun, Clustering, or Segmentation, 4P, 7H
- **Product Strategy** – One fit all, or Tailored Made
- **ESCO Strategy** – Partnership, Alliance, PR, etc.

Human Resource:
- Executive
- Sales & Marketing
- Business Development
- Legal & Accounting
- Project Manager
- Engineer
- Specialist
- 3rd Party



Process:
- ESCO Business Process
- ESCO Technical Process
- ESCO Contracting Process
- ESCO Business Development

Knowledge:
- Financial Management
- Project Management
- Engineering & Technical
- Risk & Contract Management
- Customer's Decision Making and Procurement Practice
- Policy, Regulation, and Privileges

- Cogeneration
- Power Quality
- Solar and Ozone
- Refrigeration & HVAC
- Industrial Power Systems Study
- Heat Pump

- Motor
- Boiler
- Lighting
- HV Substation
- Heat Recovery
- Ozone Application

In ESCO Business, Technology is an enabler, an answer, but not the driver!

Technology enables and supports governance of alignment and adherence to the corporate strategy.

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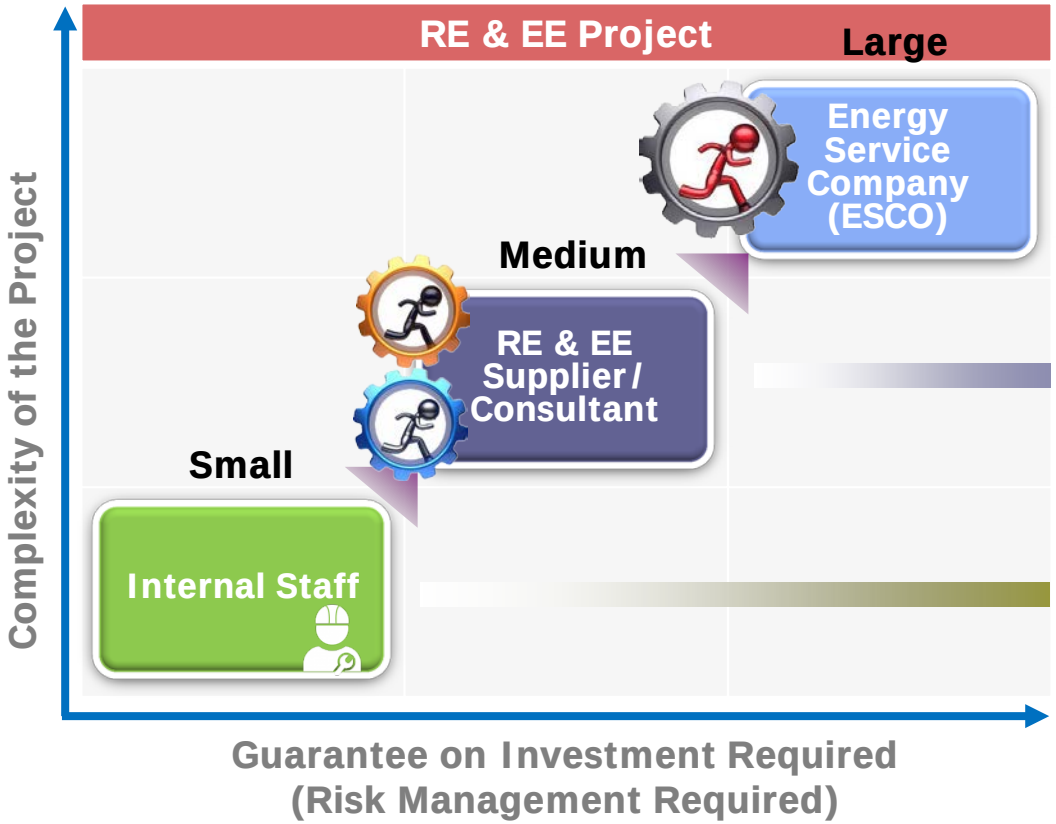
What’s the difference?

Analyze energy consumption, design and inspect construction	✓	✓	✓
Advise financial arrangement	✓	✓	✓
Equipment warranty	✓	✓	✗
Guaranteed project’s efficiency	✓	✗	✗
Compensate for deficit	✓	✗	✗
Measurement & Verification	✓	✗	✗
Operating and Maintenance	✓	✗	✗

Who is the best choice ?



Description	Key Ideas
Have ESCO develop the Project and guarantee the result until the project is fully paid back	•Ultimate risk shedding on Project Complexity through ESCO Performance Guarantee Service •Sit back & Relax!
Have **RE & EE Supplier / Consultant** develop the Project on their expertise	•Part of risk is handled through expert in the field •Medium involvement required
Have **Internal Staff** develop the Project where dedication, knowledge, and time exist	•Capability and Capacity varies from each company •Best to fine tuning and improving existing RE & EE System

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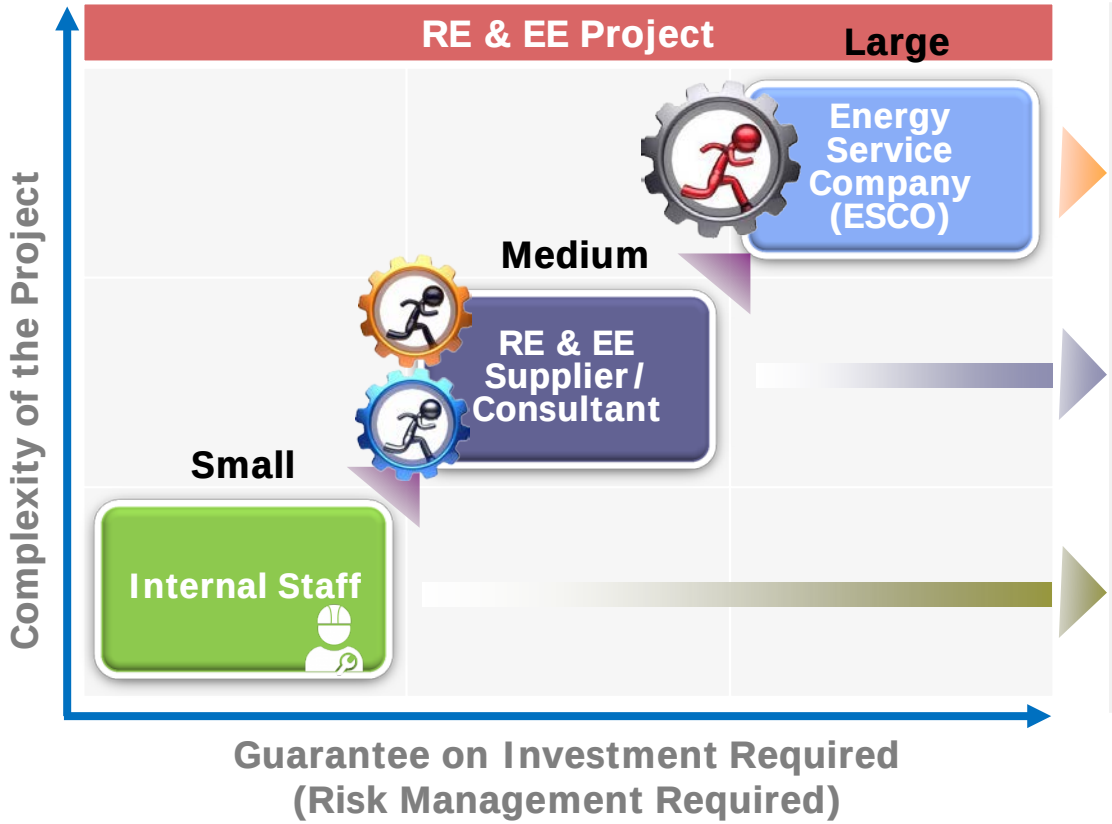
Who is the best choice ?



IMPORTANT !

- Accessibility to Financial Source
- Investment Priority
- Company's Investment Criteria and Condition (e.g. IRR, Payback Period)
- Capacity, Availability, and Capability of current staff and technical resource
- Executive Confidence Level on Project Success

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ESCO Business Model

Guaranteed Savings

Shared Savings

Guaranteed Rebate (CHAUFFAGE)

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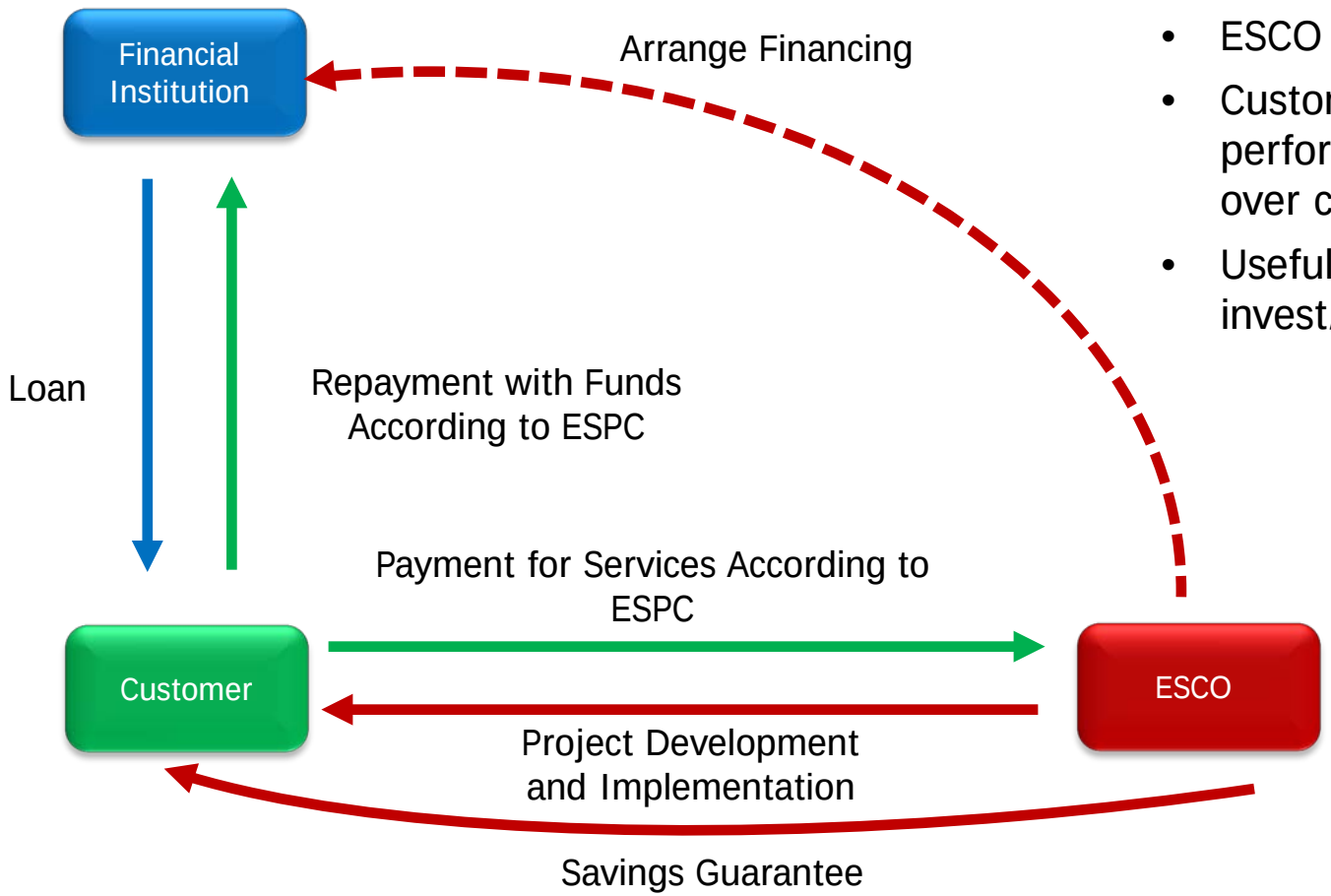
ESCO Business Model

Guarantee Saving Model



- Customer finances project
- ESCO provides performance guarantees
- Customer pays ESCO upon satisfying performance Guarantees (one-time or over contract period)
- Useful when customer can invest/borrow funds at lower cost

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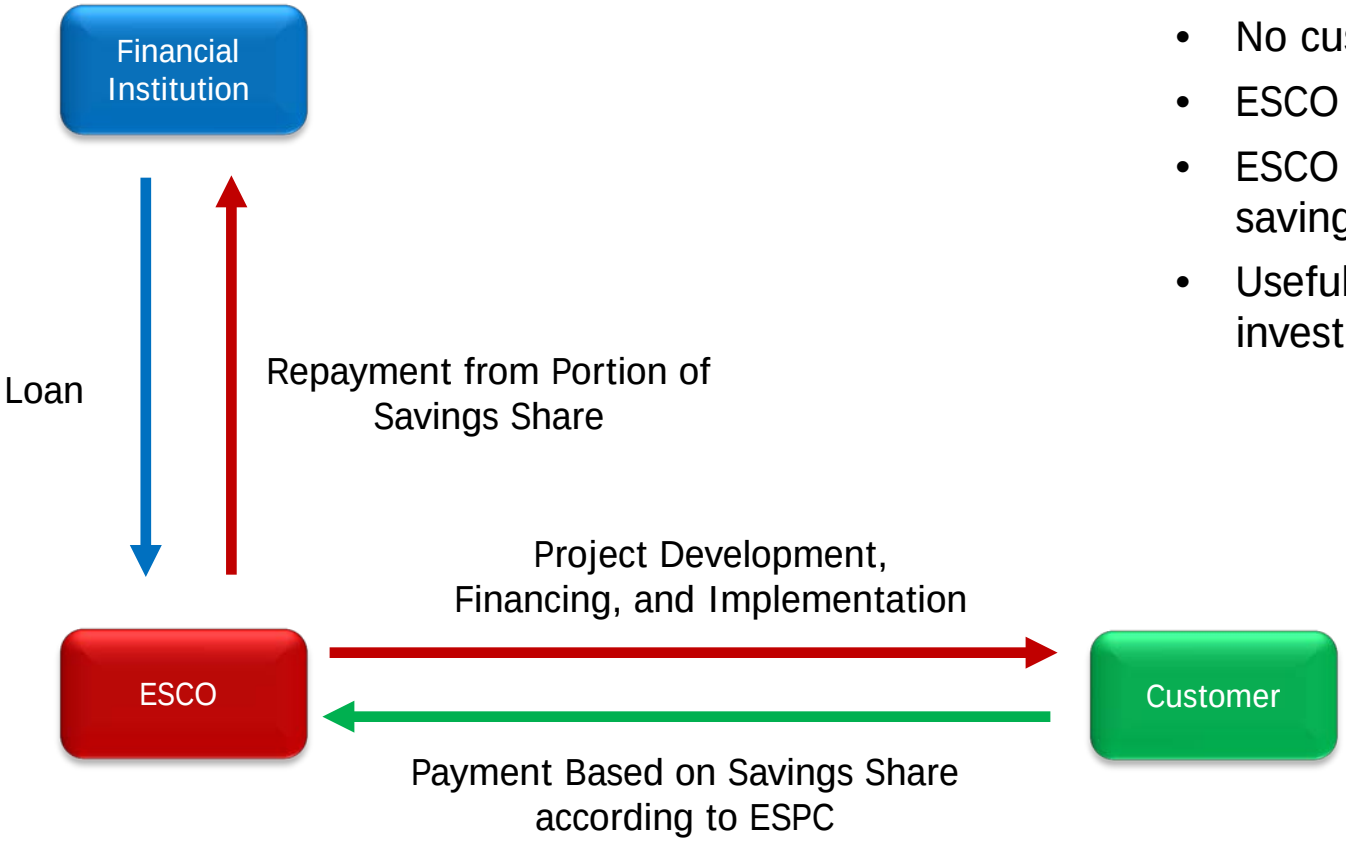
ESCO Business Model

Shared Saving Model



- ESCO finances project
- No customer investment needed
- ESCO borrows funds from FI
- ESCO and customer defined share savings over contract period
- Useful when customer does not want to invest own funds

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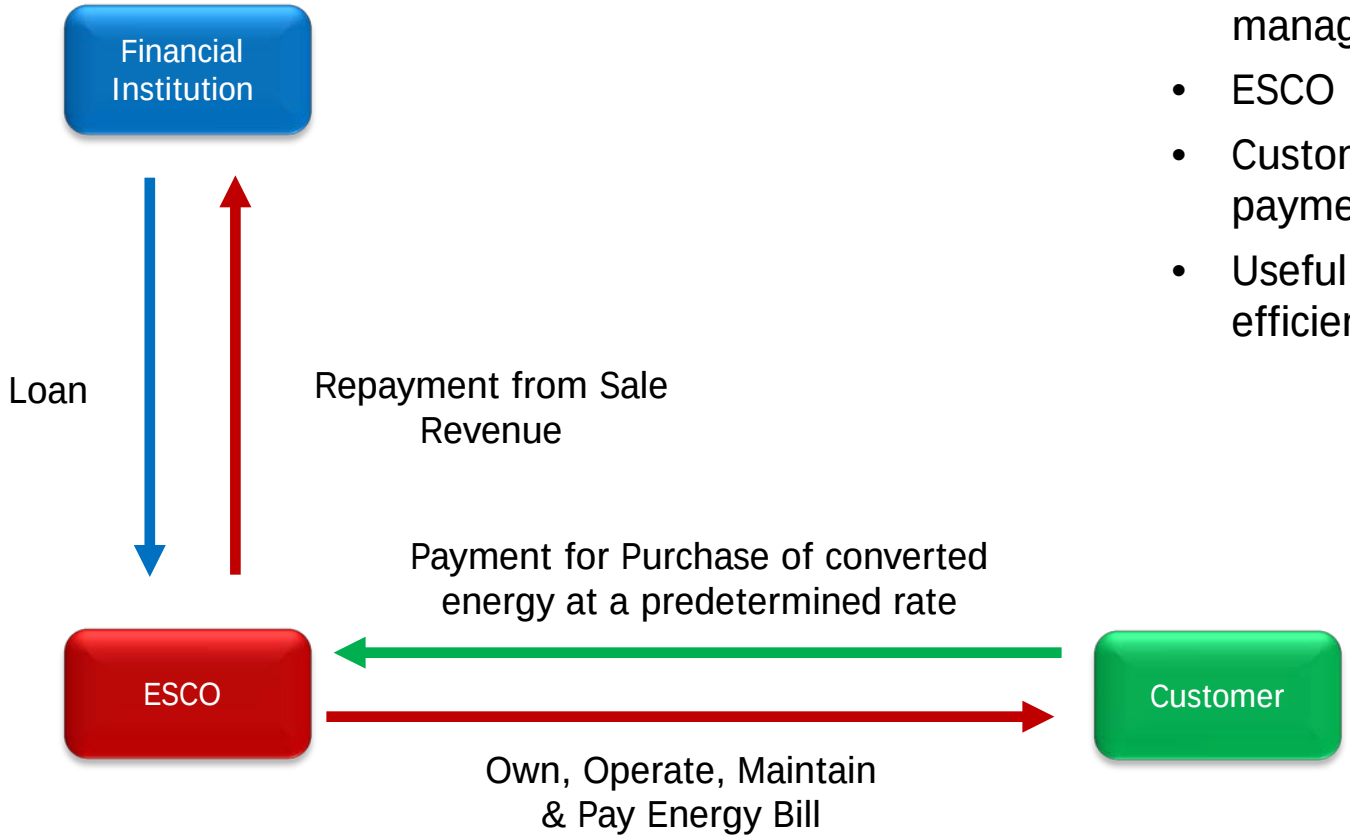
ESCO Business Model

Guaranteed Rebate (CHAUFFAGE)



- Customer outsources energy management for entire facility
- ESCO invests in equipment/efficiency
- Customer signs long-term contract for payments at fixed price
- Useful when expert help is needed for efficient energy management

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Good opportunities about ESCO Business

- Share Risk, Share Loss, Share Benefit
- Benefit Ratio is 19:1 (Customer : ESCO)
- Customer share to ESCO only 5% of net overall benefit compare to very high risk reduction.

Energy Business is still one of top rank business form continuous highly increase of energy price.

High Barriers to entry, low Competitor – Blue Ocean/Niche market

- Customer will have very low chance to gain "the guaranteed savings" if there is no ESCO support.
- ESCO revenue derives from the conversion of customer loss or waste.

- Save energy, save world under the environmental conservation criteria.
- High potential to gain additional revenue from CDM.

Premium fee together with long-term benefits from shares savings.

Long-term real partnership business.

- Municipal Solid Waste to Energy
- ORC Waste Heat Recovery to Energy
- Gasification Cogeneration System

ESCO has long experience with strong and significant reference projects.

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Thank you

For More Information

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