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Development of ESCOs and EPCs in Ireland

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Introduction

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- Energy Performance Contracting (EPC)
- Energy Service Companies (ESCO)
- EPC Models
- EPC vs Energy Supply Contracts
- Finance & Funding
- Baseline
- Measurement & Verification

Introduction (contd.)

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- Status of the Market
- Legislative & Policy Considerations
- Barriers to Market Entry
- Opportunities

What is Energy Performance Contracting?

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- Contractual arrangement between an energy user (typically a building owner) and the provider of an energy efficiency improvement measure which is verified and monitored during the term of the contract.
- Likened to Design/Build Contracting

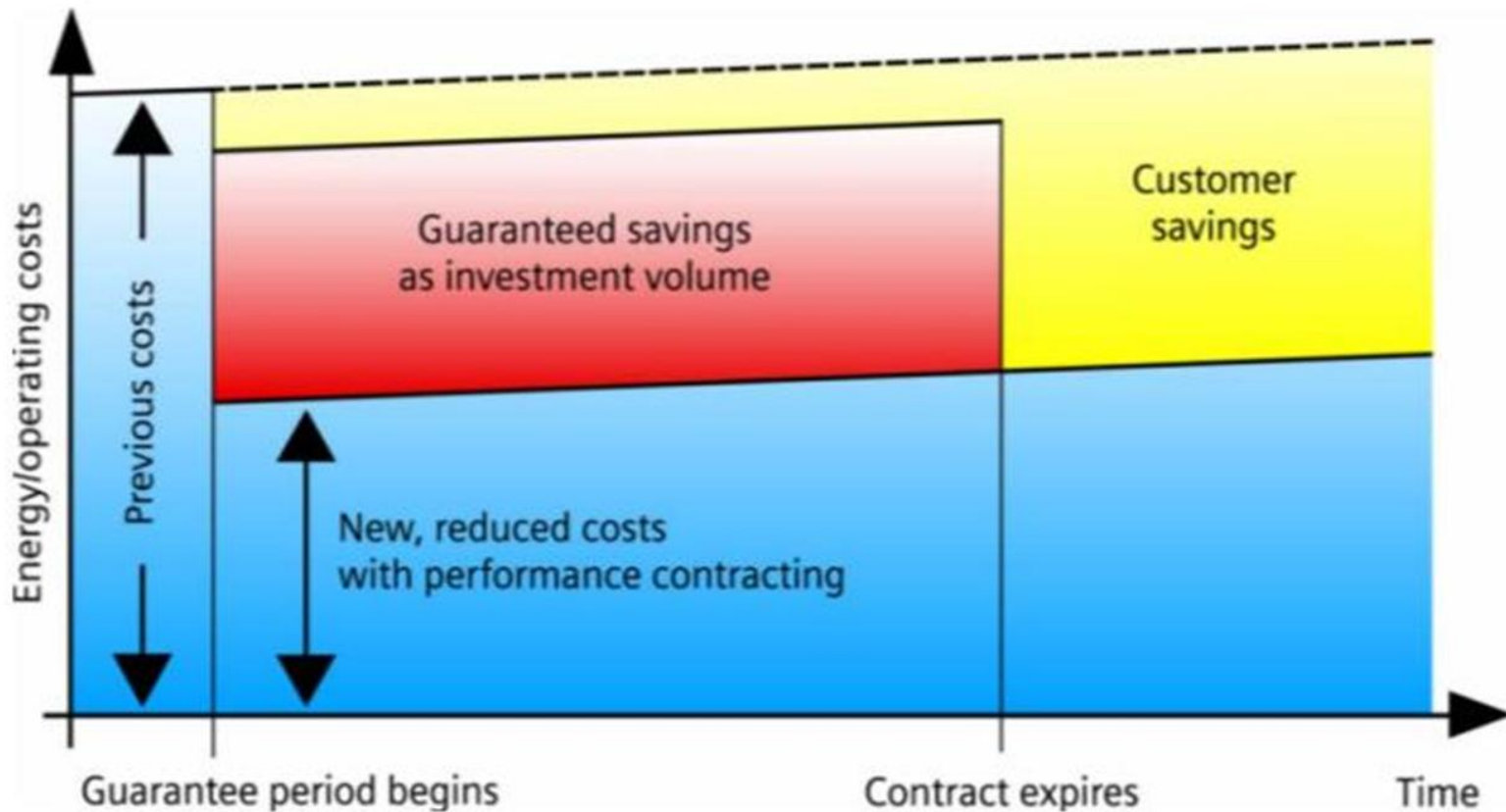


What is Energy Performance Contracting? (contd.)

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What is Energy Performance Contracting? (contd.)

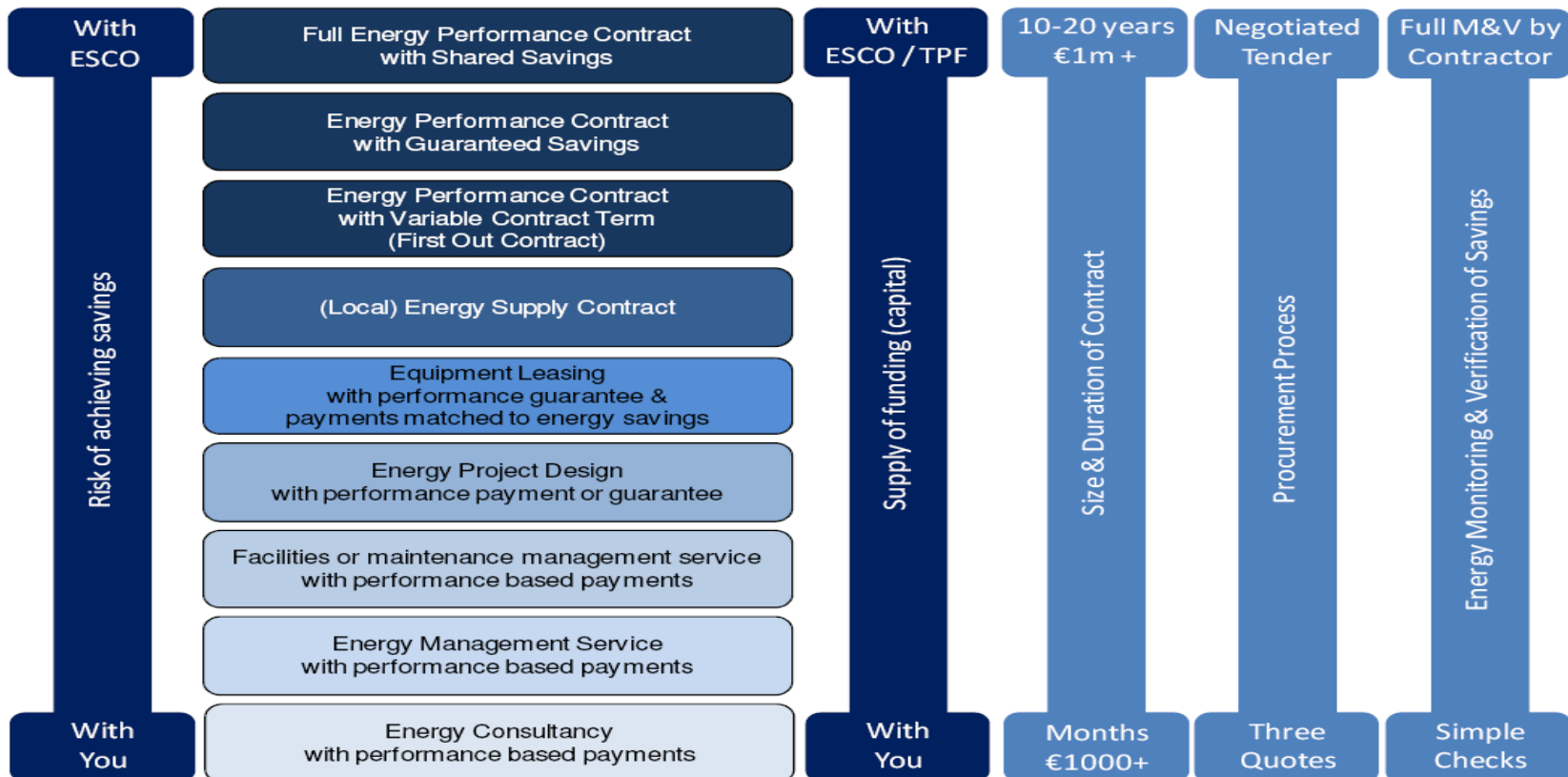
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New Approach to Energy Management - Energy Service Companies Take Performance Risk



Local Energy Supply Contracts

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- Energy Supply Contracts
 - Just that – supply of energy only
 - ESCO will operate & maintain customer's energy equipment
 - Little or no need for retrofitting
 - Sells output to customer at agreed rates
 - Profit margin – bulk purchase from utility company
- Can have an element of energy supply in EPC

What is an ESCO?

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- Definition of ESCO – Energy Services Directive 2006/32/EC
- Who is performing role of ESCO?
 - Energy Consulting Firms
 - Existing Facilities Management Companies



EPC Models

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- Shared Savings
 - Cost savings (€)
 - ESCO carries risk
 - Financed by ESCO
- Guaranteed Savings
 - Energy savings (kWh)

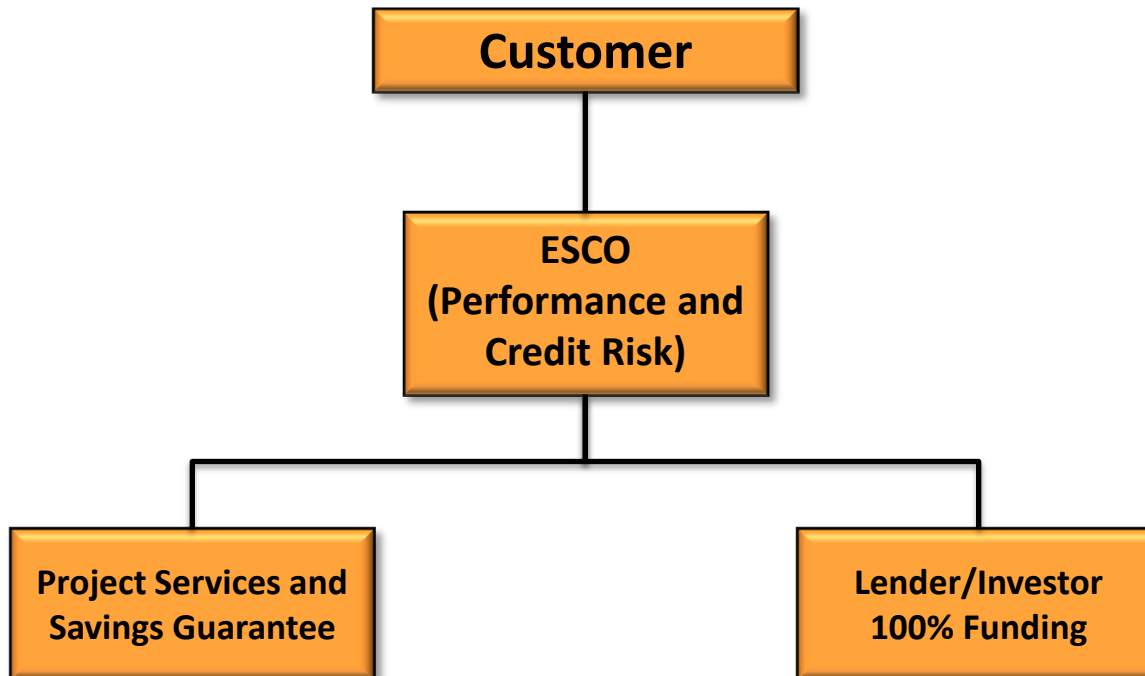


Shared Savings Structure

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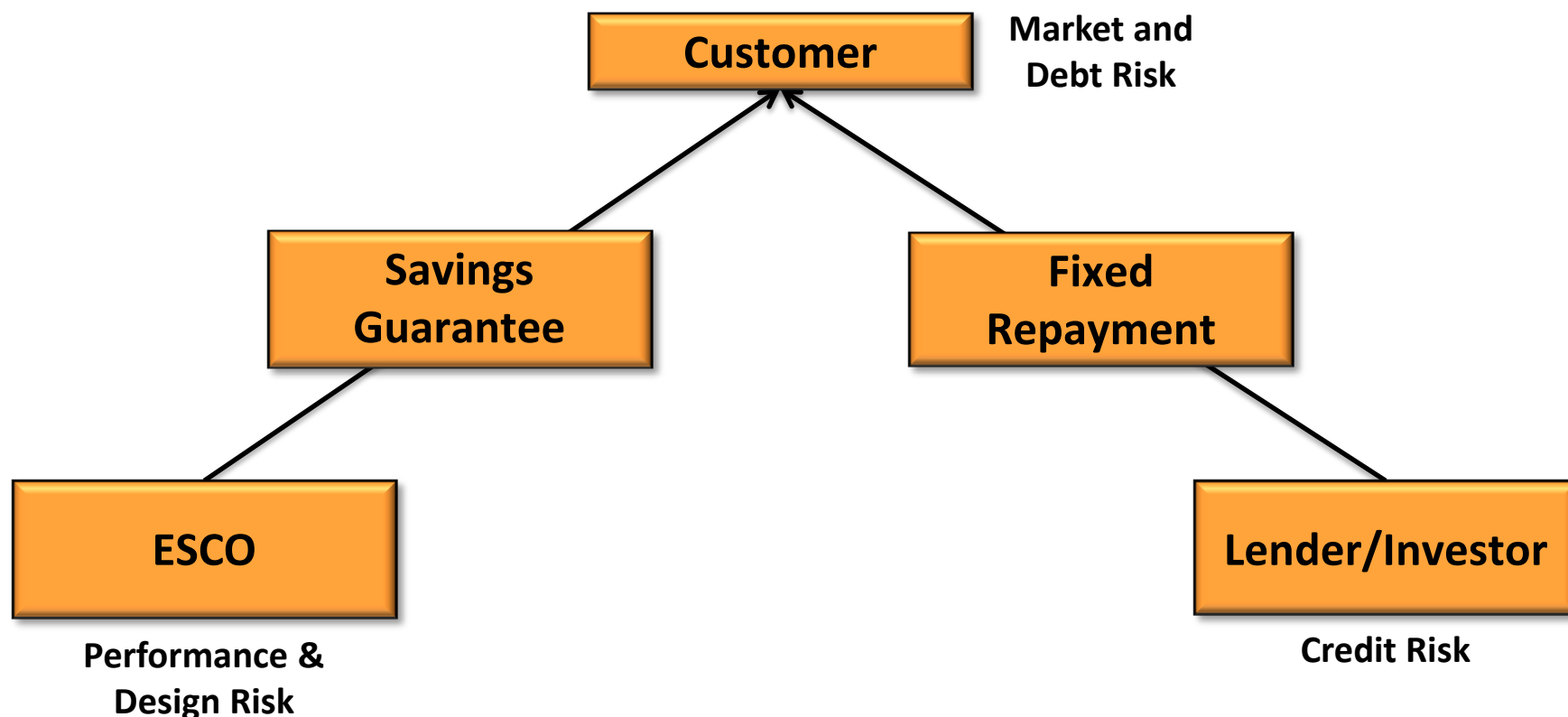


Guaranteed Saving Structure (90% of US Projects)

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Finance & Funding

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- Customer financing
- ESCO financing
- Third party financing
- Grants
- Some combination of the above



Finance & Funding (contd.)

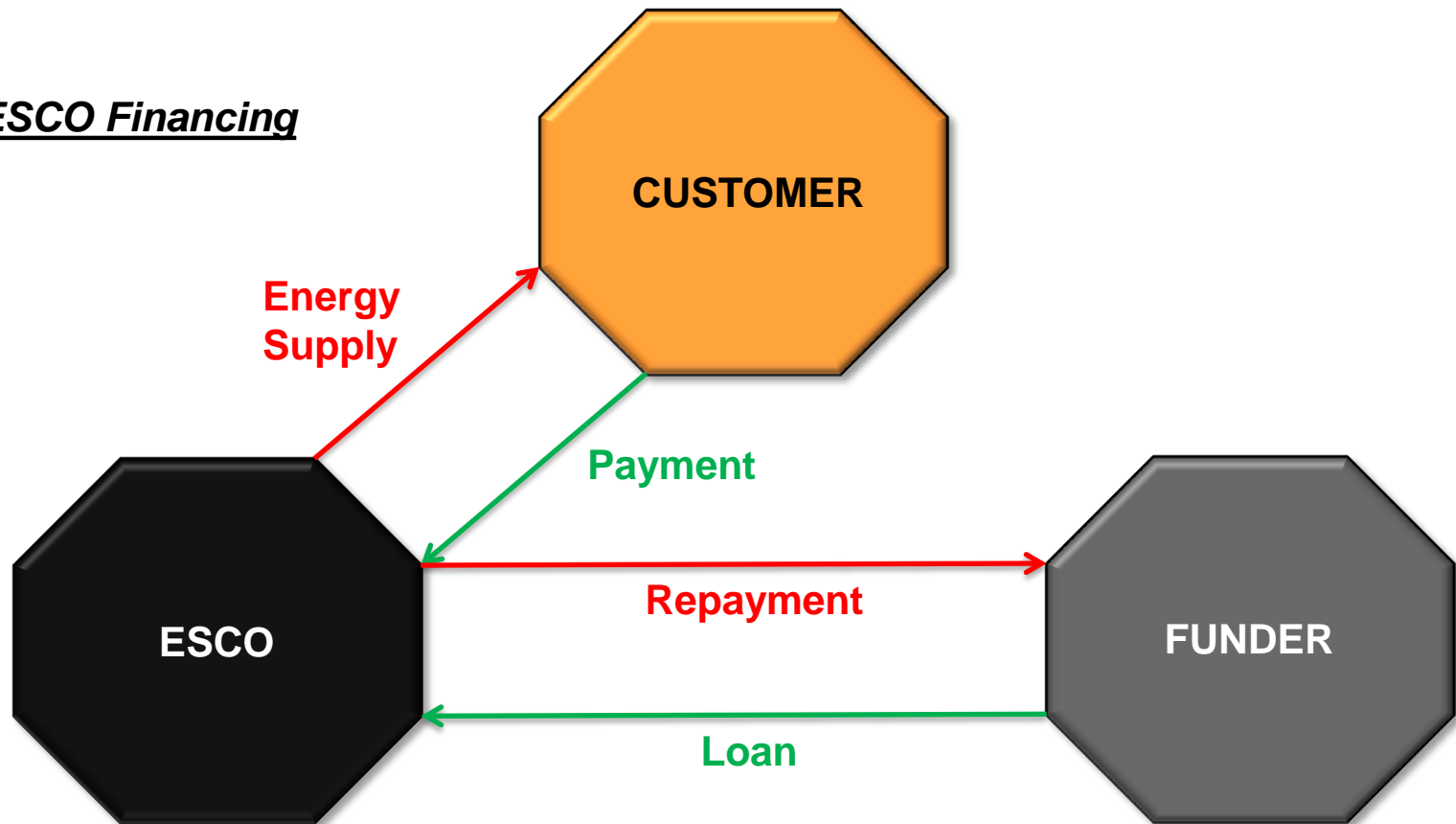
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(a) ESCO Financing



Finance & Funding (contd.)

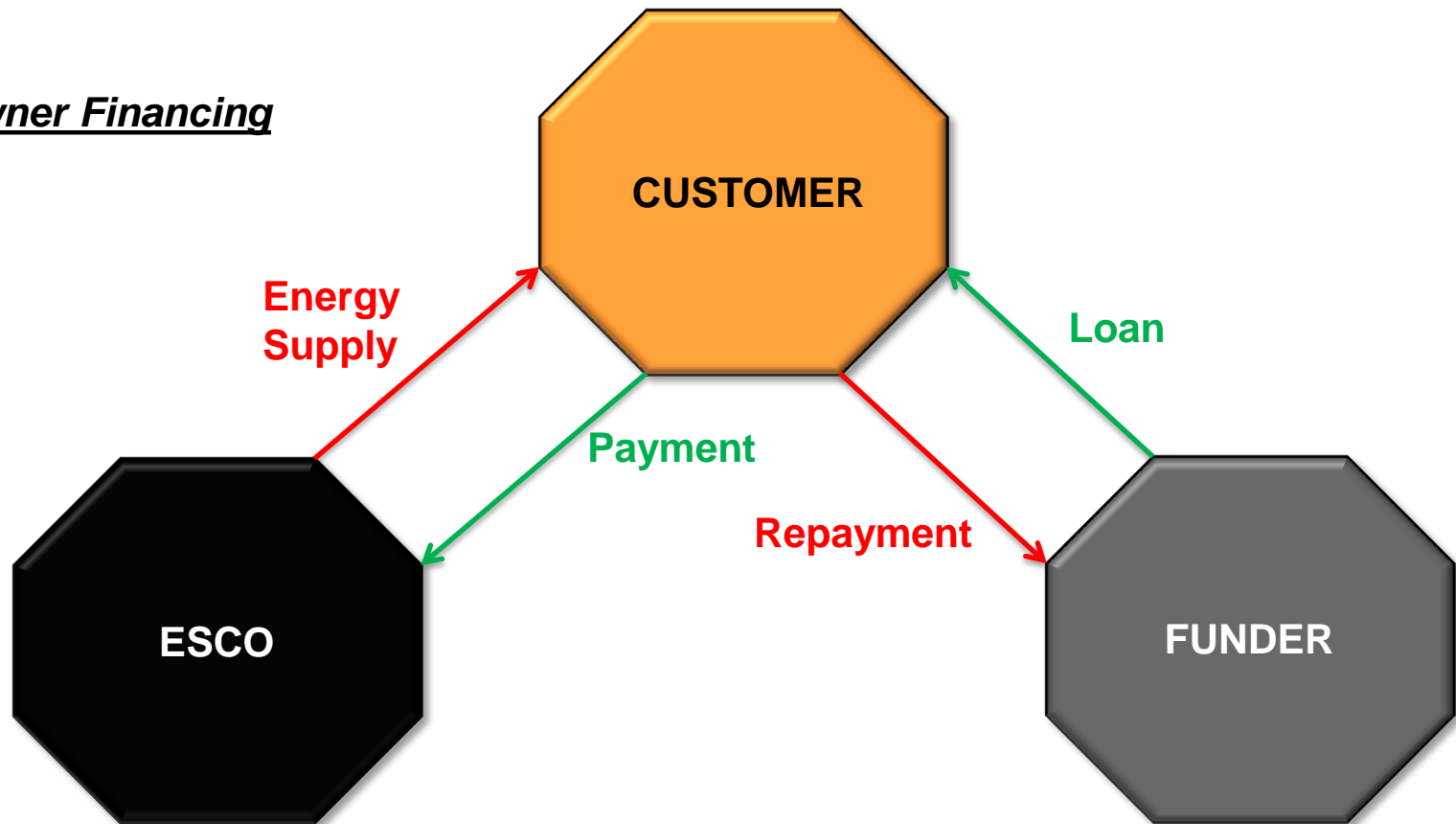
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(b) Owner Financing



Baseline

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- Starting point for EPC
- Adjustment of baseline
 - Routine adjustments: for energy governing factors expected to change during project e.g. weather, production volume etc.
 - Non-routine adjustments: for energy governing factors not expected to change during the project e.g. size of facility, occupancy type or schedule, number of shifts etc. (“static factors”)



Measurement & Verification (M&V)

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- Fundamental element of EPC
- International Performance Measurement & Verification Protocol (IPMPV)
- Options under IPMPV



Procurement

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- Procurement Directive 2004/18/EC
- Suitable Method of Procurement?
 - Competitive Dialogue
 - Negotiated Procedure



Status of the Irish Market

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- Relatively new
- US & Canada have established ESCO markets
- Need to stimulate growth



Legislative & Policy Considerations

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- Legislative Drivers

- Energy Services Directive 2006/32/EC
- Renewable Energy Directive 2009/28/EC
- Energy Performance of Buildings Directive 2010/31/EC
- New EU Directive on Energy Efficiency
- Renewable Energy Sources Directive



Legislative & Policy Considerations

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- Policy Drivers
 - Energy Efficiency Action Plan
 - Ireland's National Renewable Energy Action Plan
 - Reducing Fossil Fuel Dependency
 - Job Creation



Barriers to Market Entry

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- Lack of technical skills
- Ignorance of ESCO/EPC concept
- Financial barriers



Opportunities

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- Market will increase through legislative and policy drivers
- Job creation – opportunities for engineering professionals
- Customers can reduce energy costs and apply savings to other areas



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Thank You for Your Attention!

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