

Alternative Financing Models for Energy Efficiency Performance Contracting

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Why Performance Contracts?

- What added benefit does an independent service provider bring?
- EPC originally developed in North America and Europe was developed for two main reasons:
 - To give an abstract service more credibility to consumers
 - ESCO works to make sure that the anticipated or expected benefits of the project, over a reasonable life, will actually be realized.
 - To give more comfort to third party financial agents
 - Important to maturing an industry in developing economies such as Brazil
 - China's definition of EPC
- Benefits of third party financing

Third Party Financing in Brazil

- The only third party financing now available is utility resources mandated by the public benefit wire-charge.
- Little of the wire-charge money has gone to independent ESCOs.
- Very different outcome from the US DSM programs, which had an important role in building the ESCO market.
- Much more effort is needed in order to achieve significant commercial bank credit and investor financing.

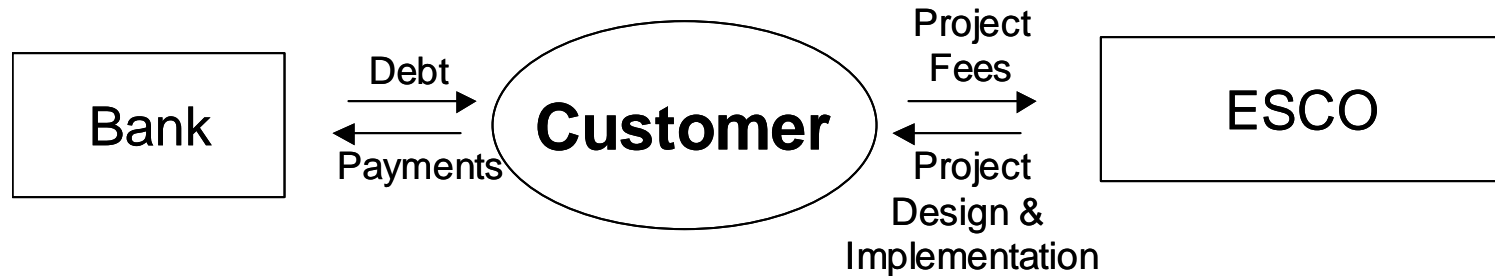
EPC and Third Party Financial Agents

- EPC provides needed comfort to banks and investors
 - It assures an adequate cash flows to pay for a project.
 - It provides the necessary third party engineering calculations needed to justify the viability of the technologies being applied under the program.
 - It provides cost estimates that will be guaranteed by a Design Build contract provided by the ESCO.
 - It adds certainty that credit goes for the stated purpose and not, say, to cover operating costs.
 - It facilitates accounting for possible carbon credits.

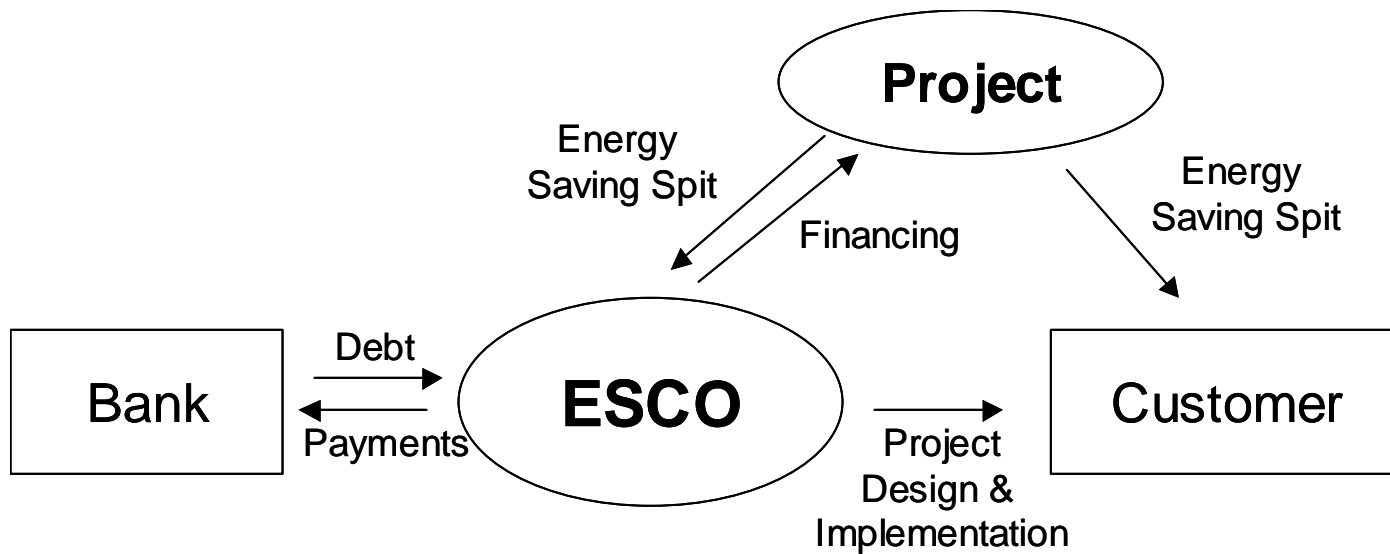
Options in Performance Contracting

- Three basic models
 - A. The loan goes on the client's balance sheet - usually known as the Guaranteed Savings model.
 - B. The loan goes on the ESCO's balance sheet – usually known as the Shared Savings model.
 - C. Financing is through a special purpose enterprise created specifically for the project.
 - In all options, the service provider or ESCO provides a guarantee of the project's technical performance and satisfaction of contracted specifications with the consumer.

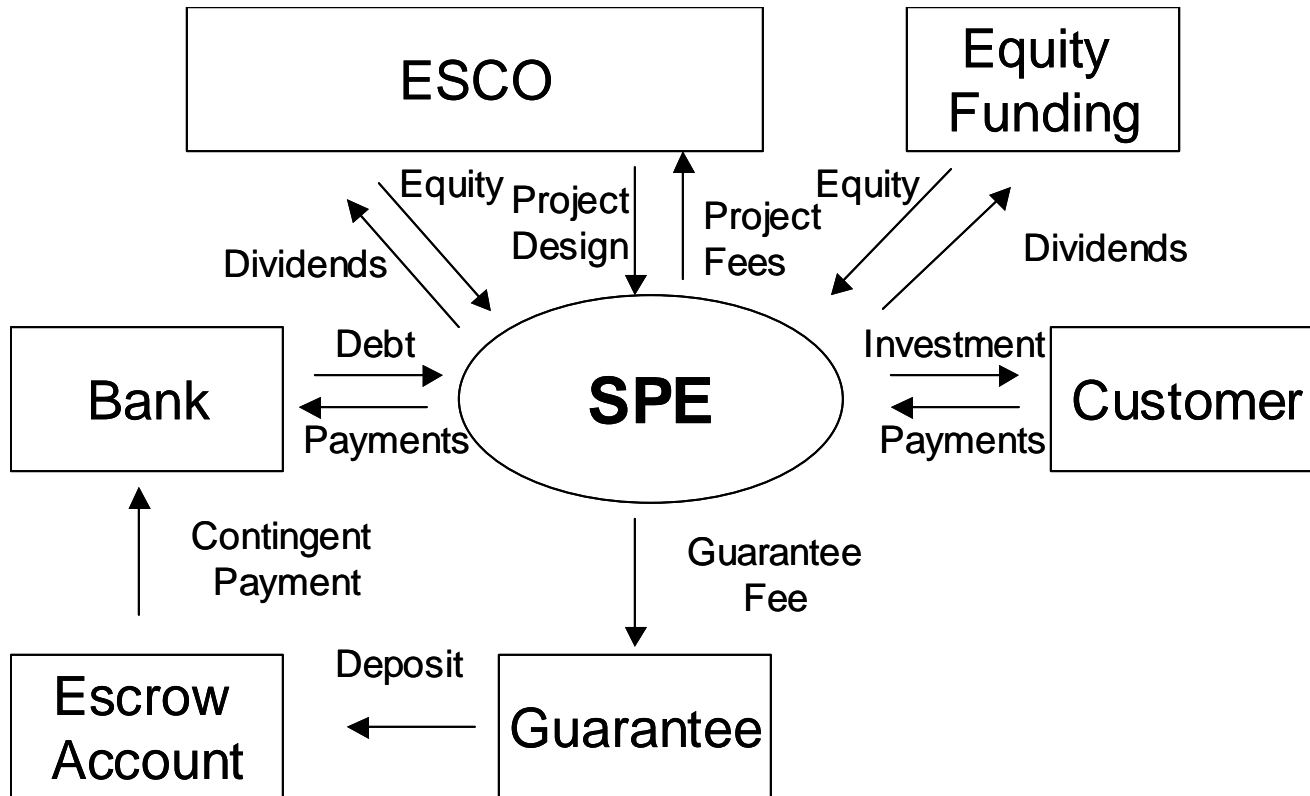
Option A (Guaranteed Savings)



Option B (Shared Savings)



Option C (SPE)



Differences between model A and B

Option A: Guaranteed Savings	Option B: Traditional Shared Savings Variant
<ul style="list-style-type: none"> •ESCO carries only performance and design risk. 	<ul style="list-style-type: none"> •ESCO carries credit, design and performance risk.
<ul style="list-style-type: none"> •Owner carries credit risk 	<ul style="list-style-type: none"> •Usually off owner's balance sheet
<ul style="list-style-type: none"> •Performance related to <u>energy</u> saved 	<ul style="list-style-type: none"> •Performance related to <u>cost</u> of energy saved
<ul style="list-style-type: none"> •Value of energy saved is guaranteed to meet debt service obligations down to a floor price. 	<ul style="list-style-type: none"> •Value of payments to ESCO linked to energy price
<ul style="list-style-type: none"> •Extensive M&V requirements and monitoring of base line 	<ul style="list-style-type: none"> •Equipment may be leased

Shared Savings Model (B)

- It has strong attractions as a marketing tool for an ESCO
- Two main attractions from the consumer's point of view
- Advantages from the ESCO perspective
- Disadvantages from the ESCO perspective
- Difficulties with the traditional Shared Savings model in North America
 - Energy Price risk
 - The “lowballing” problem
- “Paid-From-Savings” approach as a solution

SPE (option C)

- Is the ESCO an appropriate channel for financing, including credit?
- If the objective is to keep the project off the client's balance sheet, and to place the performance risk on the ESCO, another approach would be to create a Special Purpose Entity (SPE).
- SPE advantages

New Financial Mechanisms and Instruments

- Possible innovations and their impact on the financial options (A,B and C)
 - *Investment Funds* that invest risk capital in projects or equity in ESCOs or other service providers.
 - An *ESCO Finance Company* - serves as an aggregator of projects and provides financing (perhaps in the form of leases) using a mix of credit and equity.
 - A *Guarantee Facility* for medium term credit.

These possible innovations can strongly reinforce one another.

Brazil Should Provide Options for Financing

- In incipient markets, it is preferable to emphasize a single model.
- China and Eastern Europe – Option B as a single product
- Brazil's Financial Sector context
 - Consumers are somewhat more sophisticated in capitalist ways than consumers in China and Eastern Europe
 - All three options have potential in Brazil
- Option B and C in the medium term

Educating Agents in the Market

- It is necessary to continue to educate the service providers on the critical issues of an EPC.
- The market must now see actual projects implemented using performance contracting.
- Examples, Actual benefits and contracting mechanisms must be disclosed and shared with industry professionals.
- It is urgent to educate different classes of consumers, financial agents and their lawyers on how to choose service providers and to negotiate contracts.

Expanding the Scope of EPC Projects

- EPC projects can include or be linked to on-site energy supply technologies.
- Non-energy savings should also be considered.
- Opening the potentially large market for government owned installations.
- A simplified variant of the traditional EPC format may be very interesting to address the needs of Brazilian government procurement.
- By focusing on the real issues for third party financial agents and consumers, solutions can be found to overcome the Brazilian challenges.