



ECONOLER

Energy Performance Contracting and its Applications

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EE FINANCE

WHO IS RIGHT AND WHO IS WRONG?

- › **Investing in clean energy „has been a noble way to lose money“** – Joseph A. Dear, *Calpers Clean Energy & Technology Fund (USD460 million) - 2013*
- › **“Private investors will need to take a new approach to benefit from green investment opportunities”** – The Green Investment Report (2013): Green Growth Action Alliance

GLOBAL OVERVIEW OF EE DEVELOPMENT AND FINANCING

GLOBAL EE DEVELOPMENT AND FINANCING

- Practical barriers to the growth of the EE Industry
 - Weak government push, lack of harmonization of legislation and contradiction on a government level
 - Information a EE Products offered is heavily skewed towards the EE industry.
 - EE products offered are ahead of the learning curve of the market
 - Supply of financing does not match EE project peculiarities
 - Innovation may not be the best way forward.
 - Innovative projects are particularly vulnerable to developments in the external environment that are different from what was expected at design phase.
 - There are risks that some innovations will fail



GLOBAL EE DEVELOPMENT AND FINANCING

- Lesson learned about the EE industry
 - The EE industry is for the most part technical, fragmented and lacks a coordinated push.
 - Stakeholders on the technical side are the best (and sometimes the only) deal generators in developing markets.
 - The product can be more sophisticated than the client, but the packaging definitely cannot.
 - Products offered should aim to ride on the back of a stronger investment driver.

GLOBAL EE DEVELOPMENT AND FINANCING

- Lesson learned about the financing industry:
 - Banks are demand driven enterprises. They like scale and standardization.
 - Asset based lending (collateral) is the core of banking.
 - ✓ **It is there for a reason**: to reduce loan loss in case of default; to address moral hazard of the borrower;
 - ✓ **Desired properties**: ability to be ring-fenced and isolated from the borrower; sufficient liquidation value.
 - EE transactions have to be structured to resemble standard lending, not the other way around.
 - The finance sector cannot be transformed to accommodate EE financing (in its current form) without relevant provisions of the banking regulations.



BASIC EPC AND ESCO MODELS

DEFINITIONS

Energy Performance Contracting

EPC is a **contractual arrangement** between a beneficiary and the provider of an **EE project** where investments in that project are **paid in part or in full based** on a contractually agreed level of **EE improvements** and its potential impacts.

- Why do we want to promote ESCOs?
- Application – what is desirable vs what is possible - Target Market, Contractors, Economic development
- Timing of the intervention – when to begin fostering the ESCO concept and when to penetrate the market.



DEFINITIONS

Energy Service Company

An ESCO is a natural or legal person that **delivers energy services and/or other EE improvement measures** to a user's facility or premises, and accepts **some degree of financial risk** in doing so. The **payment** for the services delivered is **based** (either in full or in part) on the **achievement of EE improvements** and on meeting the other agreed-upon performance criteria.

ESCO ACTIVITIES

Basic concepts of the ESCO business model:

- › Repayments from savings allow clients to offset ESCO's costs
- › Savings are guaranteed to offset all implementation costs within a fixed period.
- › Savings will be generated on a long-term basis to benefit the client.

ESCO ACTIVITIES

Services provided by an ESCO:

- › Development
- › Identification of energy conservation measures (ECMs)
- › Engineering design
- › Financing structure*
- › Procurement
- › Construction and on-site supervision
- › Commissioning
- › Capacity building
- › Performance guarantees
- › Operations and maintenance*
- › M&V of savings

*Services not necessarily provided by an ESCO



ESCO ACTIVITIES

ESCOs are generally classified as:

- › Independent ESCOs—concentrate on few geographic markets and/or target specific client market segments;
- › Building equipment manufacturers—have an extensive network of branch offices;
- › Utility companies—regulated or state-owned electric or gas utilities, concentrate on regional markets or focus on the service territories of their parent utilities;
- › Other energy/engineering companies—owned by international oil/gas companies, non-regulated energy suppliers or large engineering firms.



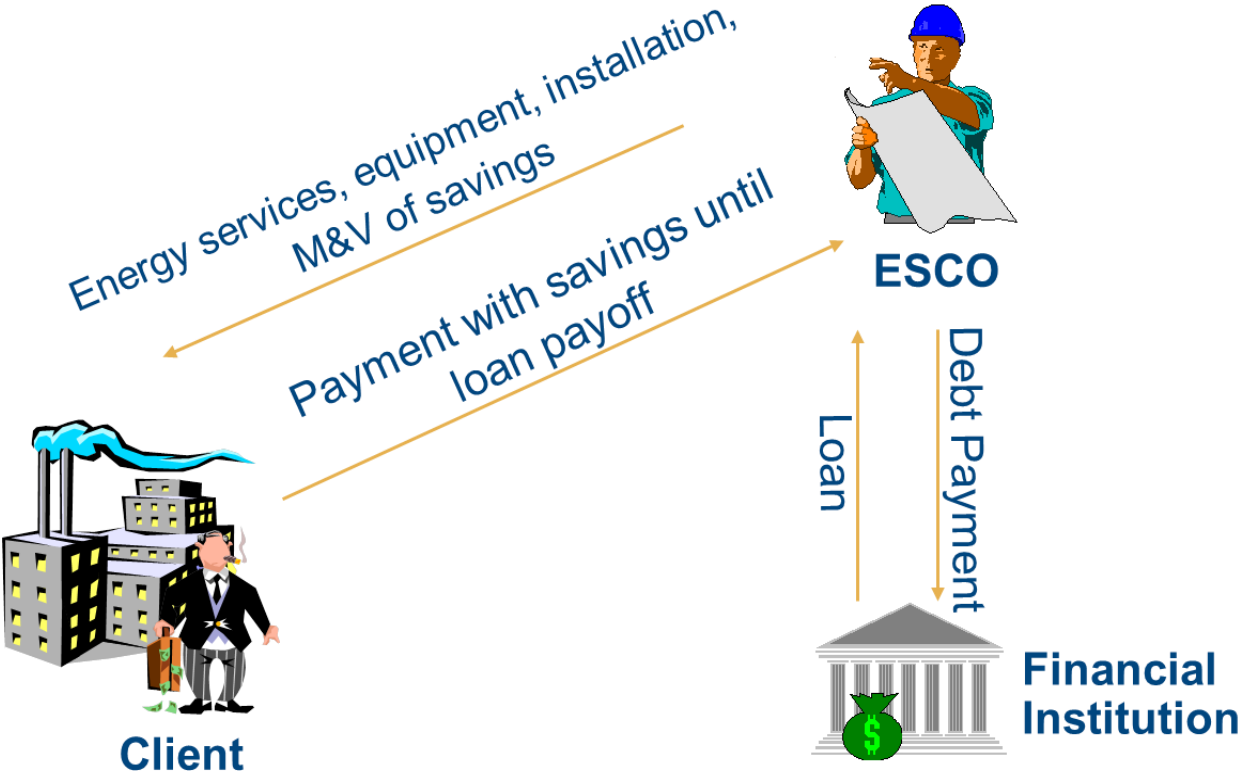
ESCO ACTIVITIES

ESCOs can be differentiated on the basis of their marketing approach:

- › Technology (boilers, controls, lighting, etc.)
- › Sales approach
- › Vertical market (schools, hospitals, steel plants, etc.)
- › Utility suppliers (electricity, heating/cooling or compressed air, etc.)

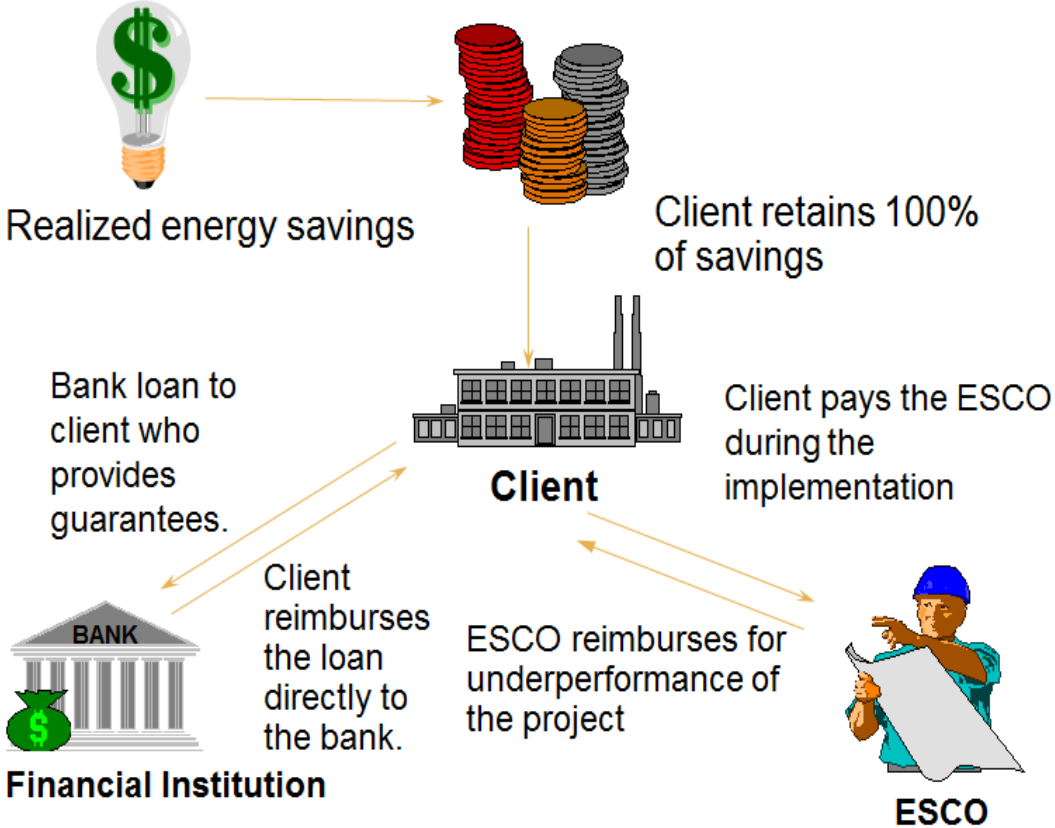
ESCO MODELS

Shared-savings EPC



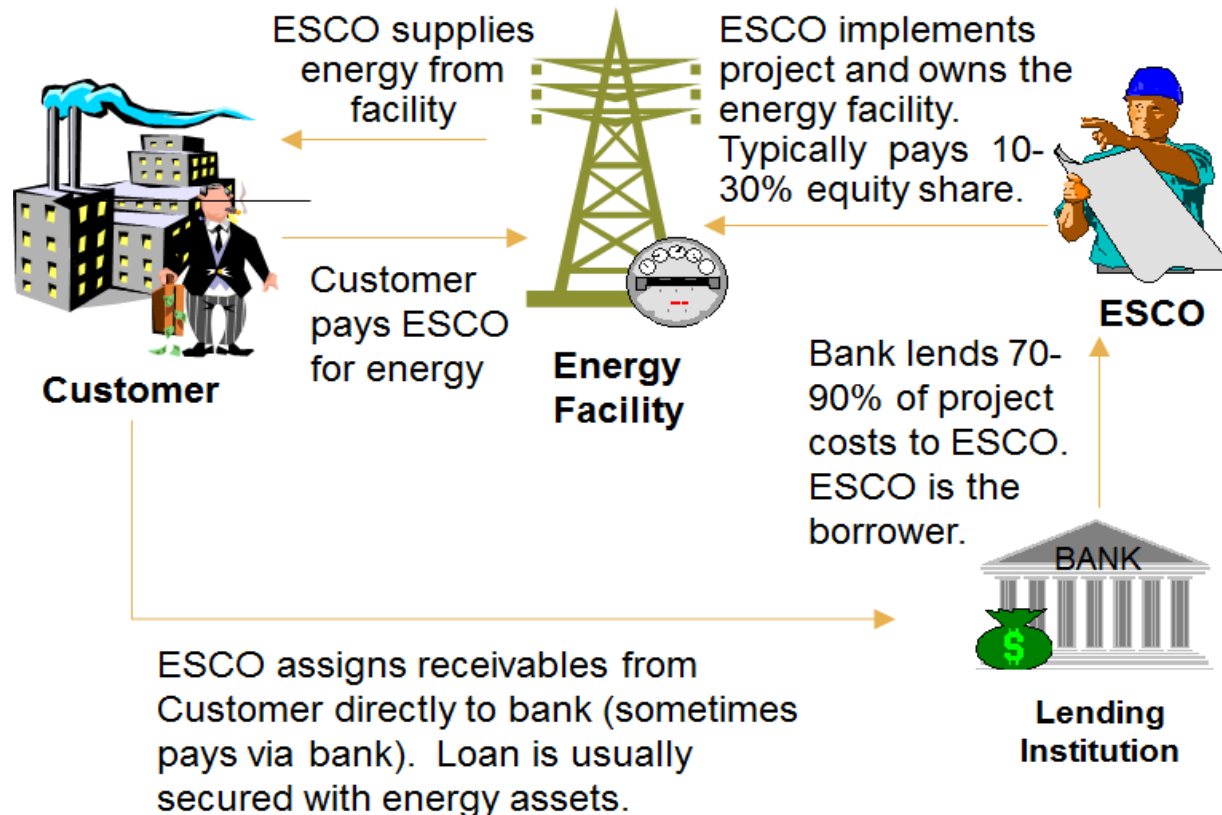
ESCO MODELS

Guaranteed-savings EPC



ESCO MODELS

Chauffage



ESCO MODELS

Comparison of the various models

Contract Type	Who's Balance Sheet?	Who Bears the Performance Risk?	Project-Specific Financing?
Shared Savings	ESCO	ESCO	Yes
Guaranteed Savings	Customer	ESCO	Yes
<u>Chauffage</u>	ESCO	ESCO	No

Other types of models:

- › Leases
- › Other non-recourse financing vehicles



LESSONS LEARNT

- ESCO model is too sophisticated for most developing markets.
- The ESCO industry can only be fostered through transactions, not through trainings.
- To have any market impact, ESCOs need:
 - a market with sufficient size for ESCOs to get experience specialize and grow;
 - Time for ESCOs to evolve from technology and solutions providers to real performance contractors (more than just technical risks).
 - a great degree of sophistication of the clients
 - a great degree of sophistication of the financial services market
 - an effective and transparent judicial system
- ESCOs are good in sectors with high replication potential (buildings, industry - technology specific projects)
- ESCOs cannot grow without public support.
- The key to marketing ESCOs is not innovation, but simplification.

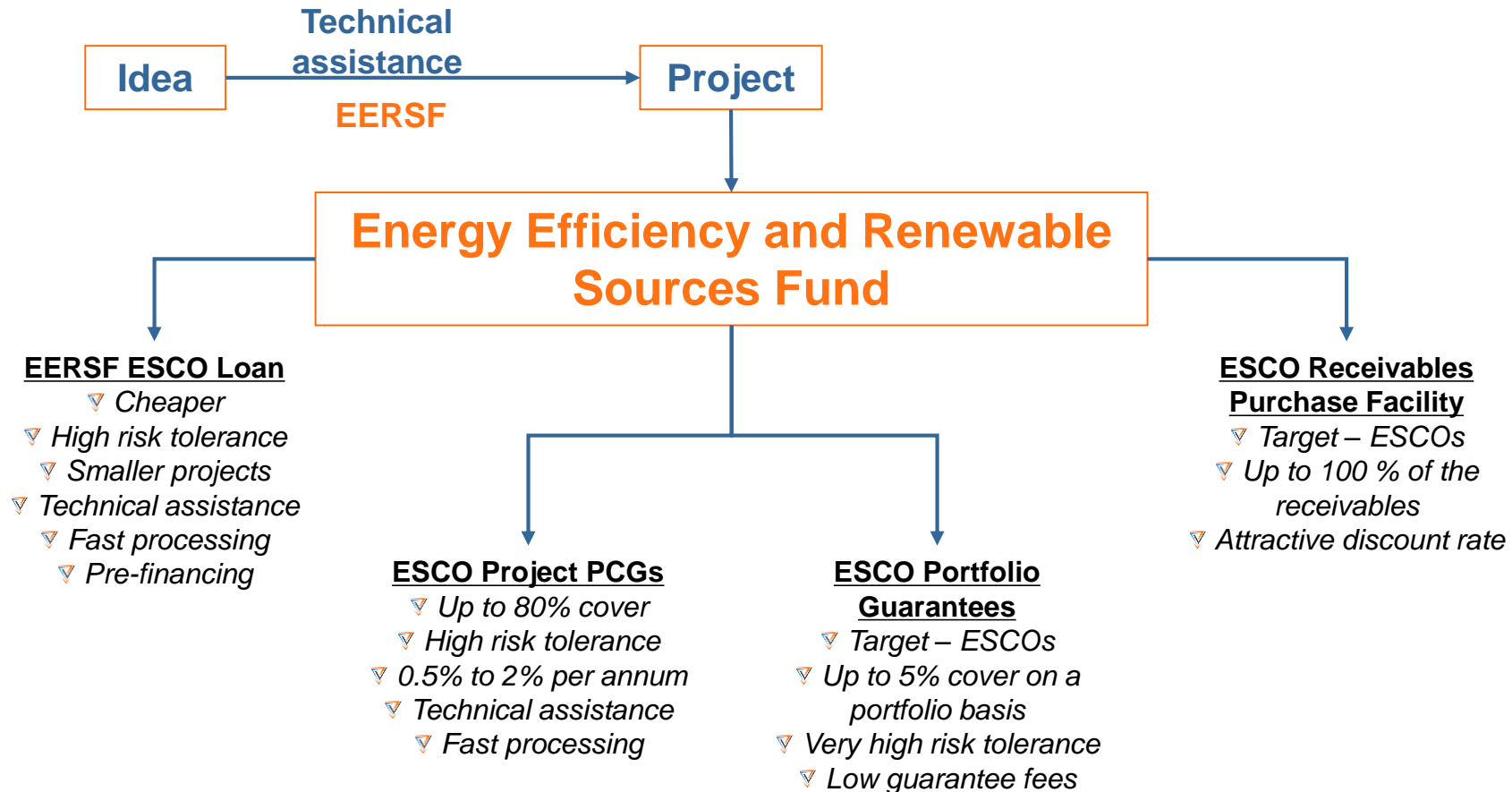
EXAMPLES

THE ESCO MARKET IN BULGARIA

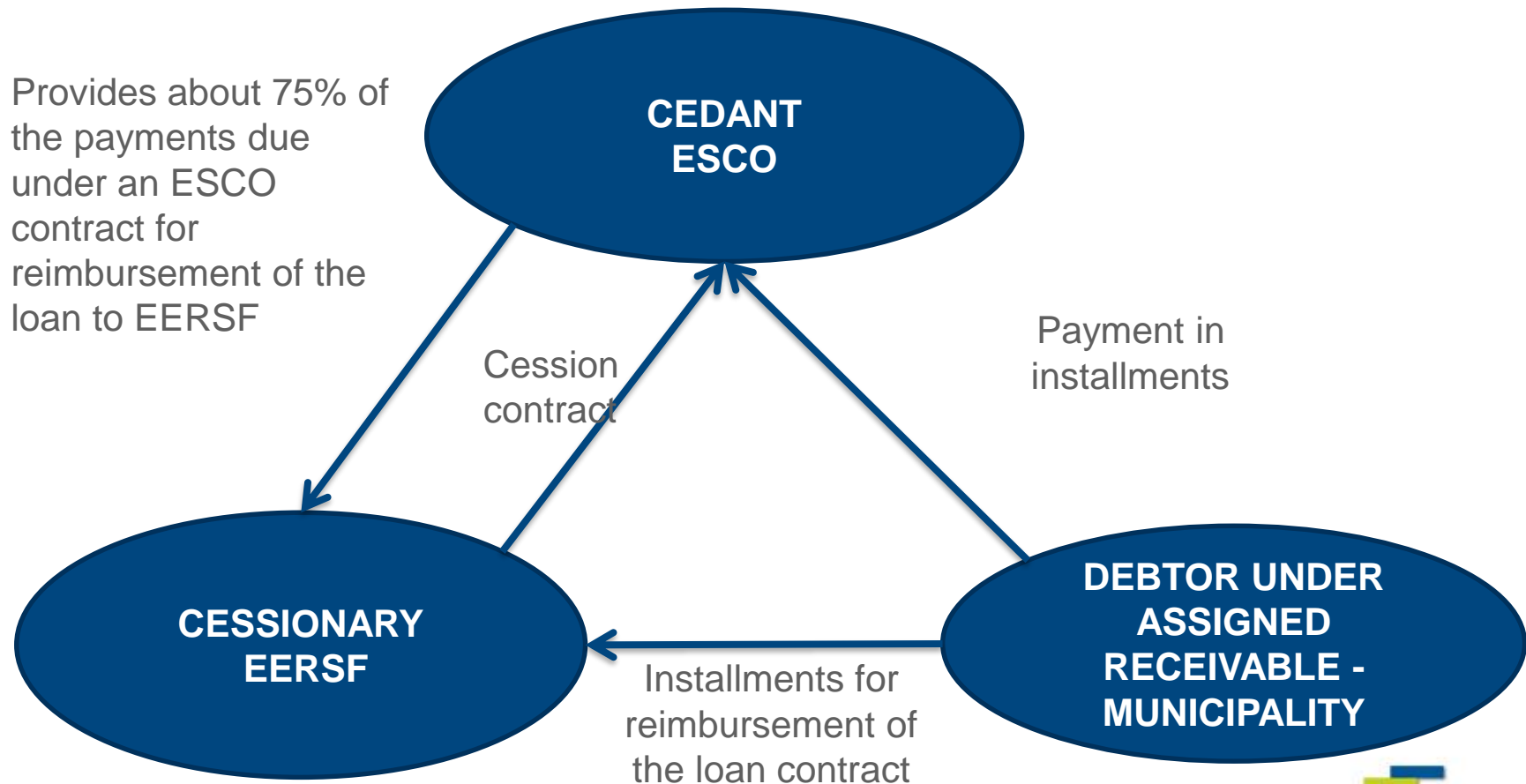
- ESCOs operate mainly in public sector (buildings and street lighting)
- EPC is a minor line of business of the contractors acting as ESCOs
- EPC is sometimes implemented via SPVs
- Scarce few projects in residential buildings have been implemented via EPC.
- Financiers – EERSF, EBRD, Commercial Banks, EU Structural Funds

	Reported ESCOs
2005	18
2010	39
2015	5

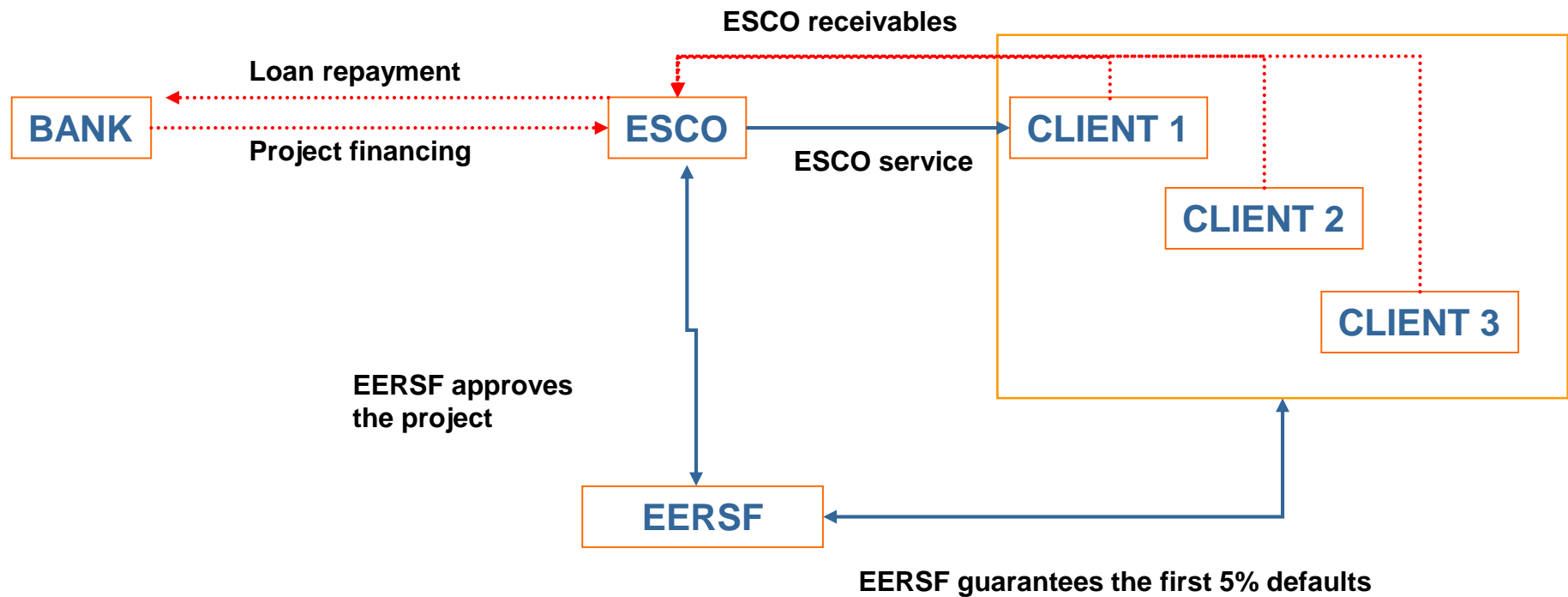
ENERGY EFFICIENCY AND RENEWABLE SOURCES FUND (EERSF)



EERSF – ESCO CESSION CONTRACT



EERSF – PORTFOLIO GUARANTEE

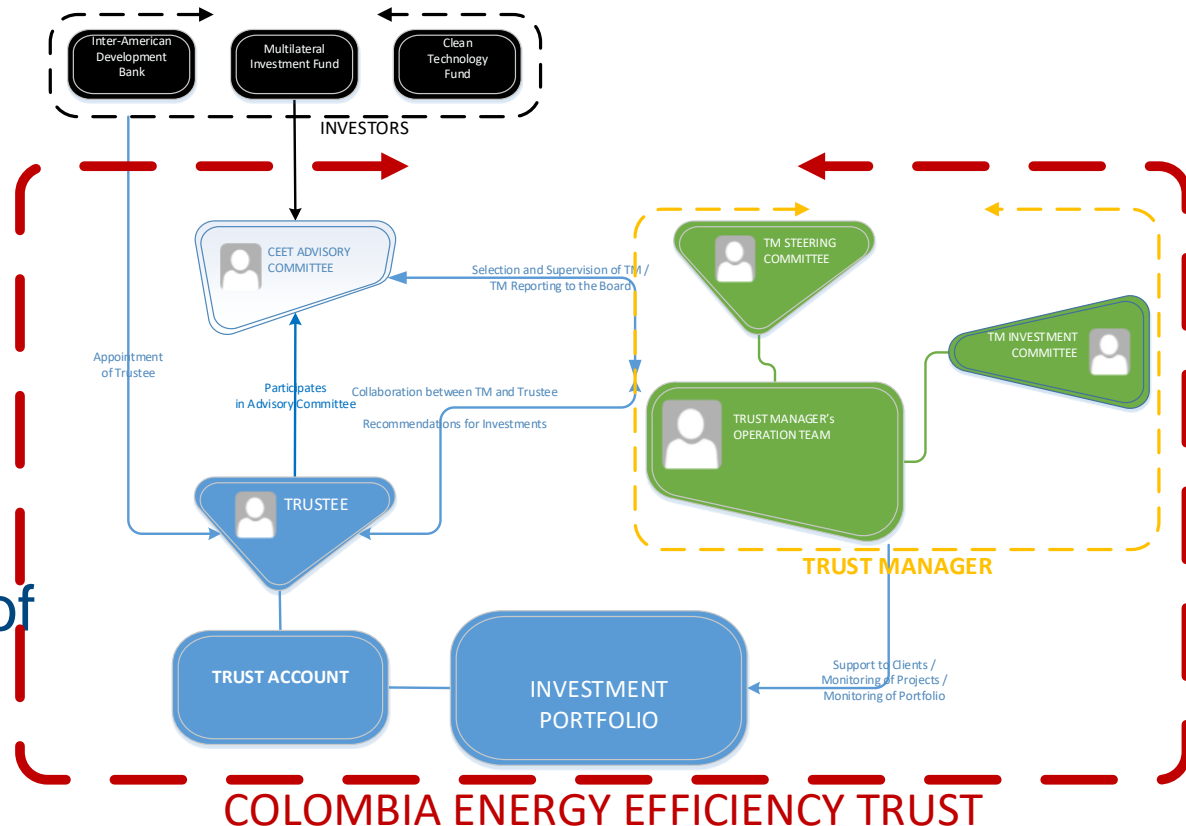


ESCOS – LESSONS LEARNT

- Piloting is almost always successful, but scaling up almost never happens
- For scaling-up we need standardization on both sides – operations and sourcing of funding.
- Sustainability – can only be achieved if financing is among the last barriers to be addressed

ATTEMPT AT STANDARDIZATION

- Colombian Energy Efficiency Trust – currently being set up
 - Tiered private + IFI equity investors + IFI debt.
 - Main target: financing of Colombian ESCOs on commercial basis
 - \$24 million seed capital, scalable as necessary.



Thank You!

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