Refinancing of Energy Efficiency Services

An underrated business opportunity related to green finance

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REFINEE

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REFINE GLOSSARY

Taking into account the fact that some of the terms that are important in the context of the REFINE-project are not used in a uniform way throughout Europe, we present the following list of definitions:

Energy efficiency (EE): The ratio of output of performance, service, goods or energy, to input of energy

Energy efficiency improvement (EEI): An increase in energy efficiency as a result of technological, behavioural and/or economic changes

Energy efficiency improvement action or **measure:** An action normally leading to a verifiable, measurable or estimable energy efficiency improvement

Energy efficiency improvement investment: An EEI measure that requires the use of upfront investments, usually through the involvement of a financial institution (FI), and regardless whether these investments are related to hardware installations or to services.

Energy efficiency service (EES): Agreed task or tasks designed to lead to an energy efficiency improvement and other agreed performance criteria. The EES shall include energy audit as well as identification, selection and implementation of actions and verification. A documented description of the proposed or agreed framework for the actions and the follow-up procedure shall be provided. The improvement of energy efficiency shall be measured and verified over a contractually defined period of time through contractually agreed methods [EN 15900:2010]. If the EES includes EEI investments, it may or may not include financing of these investments.

Partial services connected to EES: Services that just include parts ("components") of the EES value chain like design and implementation (excluding verification, for example), but are designed to directly or indirectly lead to an energy efficiency improvement. If the partial EES includes EEI investments, it may or may not include financing of these investments.

Energy efficiency service provider: A company that offers EES to its clients. Another term frequently used in this context is ESCO (Energy Service Company), but this term is mostly connected to the provision of energy performance contracting (EPC) or energy supply contracting (ESC), which are specific forms of EES.

Energy Performance Contracting (EPC): A comprehensive energy service package aiming at the guaranteed improvement of energy and cost efficiency of buildings or production processes. An external ESCO carries out an individually selectable cluster of services (planning, building, operation & maintenance, (pre-) financing, user motivation …) and takes over technical and economic performance risks and guarantees. Most projects include third party financing. The services are predominantly paid out of future saved energy costs (Graz Energy Agency Ltd, 2008).

Financing Models for Market Growth: Financing models that enable EES providers to clean up their balance sheet, thus gaining financial leeway for new projects. In many cases, these models contain a refinancing scheme.

Refinancing: A model, where an EES provider sells and a refinancing institution acquires receivables to be paid by an EES client, thus leading a restructuring of the initial financing set-up which may have been ensured through the EES provider's cash flow, credit financing, leasing financing or other financial means.

Sale of receivables or **sale of claims:** umbrella term for any kind of receivables purchase agreements that allow a company (in our case an EES provider) to sell off the as-yet-unpaid bills or expected receivables from its customers.

Cession: In the REFINE-project, we understand cession as the legal term for the assignment of receivables.

Factoring: A specific form of receivables purchase agreements, where short-termed receivables are sold. The non-payment risk remains with the seller.

Forfaiting: The sale of longer-term account receivables usually without right of recourse. (widely used in export business)

Definitions of on-balance sheet types of financing

Debt financing: Situation in which investors lend a certain amount of money on credit in exchange for repayment plus interest. The most common EE financial product is a loan directly to the client (owner of the premises) or to the ESCO – this is known as third-party financing (TPF).

Equity financing: Situation in which investors lend a given amount of money in exchange for a stake in a project. The most common example of equity financing is private equity. With respect to energy efficiency businesses, equity investment can take the form of an ESCO issuing additional shares in the company's common ownership.

Mezzanine financing: Mezzanine financing is a hybrid form of financing that combines debt and equity financing. In most cases, debt will be ranked as a preferred equity share. Mezzanine debt financing is thus riskier than traditional debt financing but also more rewarding; it is associated with a higher yield. Mezzanine financing also allows a lender to convert debt capital into ownership or equity interest in the company if the loan is not paid back on time and in full.

Definitions of off-balance sheet types of financing and entities

Project financing: Project finance, by contrast to on-balance sheet financing (loans, debt and equity), bases its collateral on a project's cash flow expectations, not on individuals or institutions' creditworthiness. It is off-balance sheet financing. A typical project financing is divided between debt and equity financing.

Leasing: Leasing is the energy market's common way of dealing with initial cost barriers. It is a way of obtaining the right to use an asset. Finance leasing can be used for EE equipment, even when the equipment lacks collateral value. Leasing companies, often bank subsidiaries, have experience with vendor finance programs and other forms of equipment finance that are analogous to EE. Leasing is the most common form of equipment manufacturers' vendor financing, which is often applied in the case of combined heat and power (CHP) equipment. Leasing is often done as part of a Special Purpose Vehicle.

Special Purpose Vehicle (SPV) / Special Purpose Entity (SPE): A firm or other legal entity established to perform some narrowly-defined or temporary purpose, which facilitates off-balance sheet financing of projects. A standard approach is to form a SPV / SPE and place assets and liabilities on its balance sheet. The investors accomplish the purpose for which an SPV / SPE has been set up – for example implementing a large EE project – without having to carry any of the associated assets or liabilities on their own balance sheet.

DISCLAIMER

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1 CHALLENGES IN FINANCING ENERGY EFFICIENCY INVESTMENTS

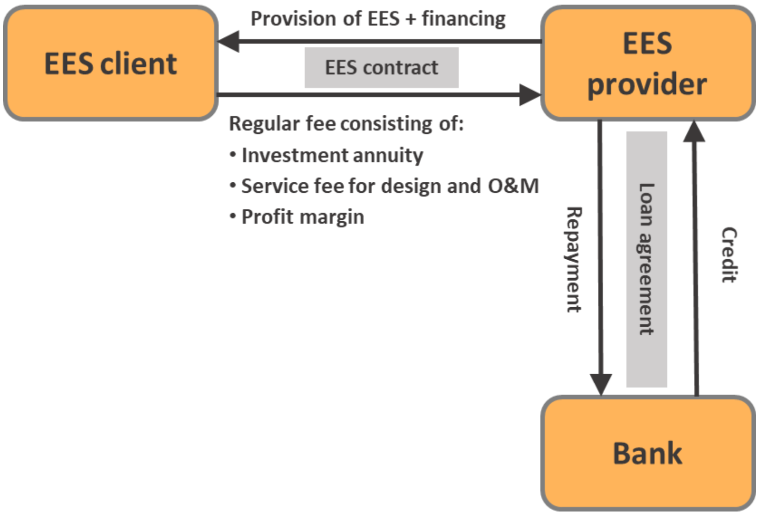
There exists a general consensus among experts that **large potentials of cost-efficient energy efficiency (EE) investment are currently untapped**. Furthermore, these potentials are steadily expanding due to technological innovation.

However, **limited access to financial resources** – although not the only barrier – represents a serious restriction for the implementation of energy efficiency measures. From the client's perspective, the most important issue is to stay within credit limits. For example, household clients will ask themselves, whether they can afford the thermal refurbishment of their home, whereas corporate clients will analyse the impact of the EE investment on the key credit figures and may decide. Equally, public clients (municipalities, regional and federal authorities, etc.) are tied by budgetary constraints. Therefore, **EE investments compete with other investment needs**. Even if they are economically viable – usually through repayment of the investment by energy and other operating cost savings – and bring forward additional non-energy benefits, the corporate client may give preference to core-business investment options that promise better return on investment. Similarly, a household or a public building owner may decide to postpone the EE investment because other funding needs are more urgent.

For financing institutions (FI), EE investments are cumbersome, because they are usually small, complex and cash flow is generated from cost savings and not through sales on the market. Therefore, FIs – even if they wish to **grow towards "green finance"** – have difficulties to channel their resources towards EE investments.

2 ENERGY EFFICIENCY SERVICES FACILITATE EE INVESTMENTS

Energy efficiency service providers address the reluctance clients' and FIs to finance EE investments by incorporating financing into their service packages. **Energy efficiency service (EES)** are a wide-spread business models, where EE specialists (EES providers or ESCOs) offer a integrated solutions from a single source (planning, implementation, operation, maintenance and monitoring) and take over a part of the investment risk through the provision of a performance guarantee. For many clients it is attractive, if the EES provider is able to arrange funding of the project (so-called **Third-Party-Financing**) so that the client can take advantage of the multiple benefits of an EE investment without encumbering his own affordability and/or credit limits. In this case the EES provider prefinances the investment and gets repaid through yearly remunerations which are dependent on the actual savings achieved. Therefore, the main source for repayment of any EES project financing is thus the cash flow generated by agreed and (many times) guaranteed energy cost savings (cf. figure below).

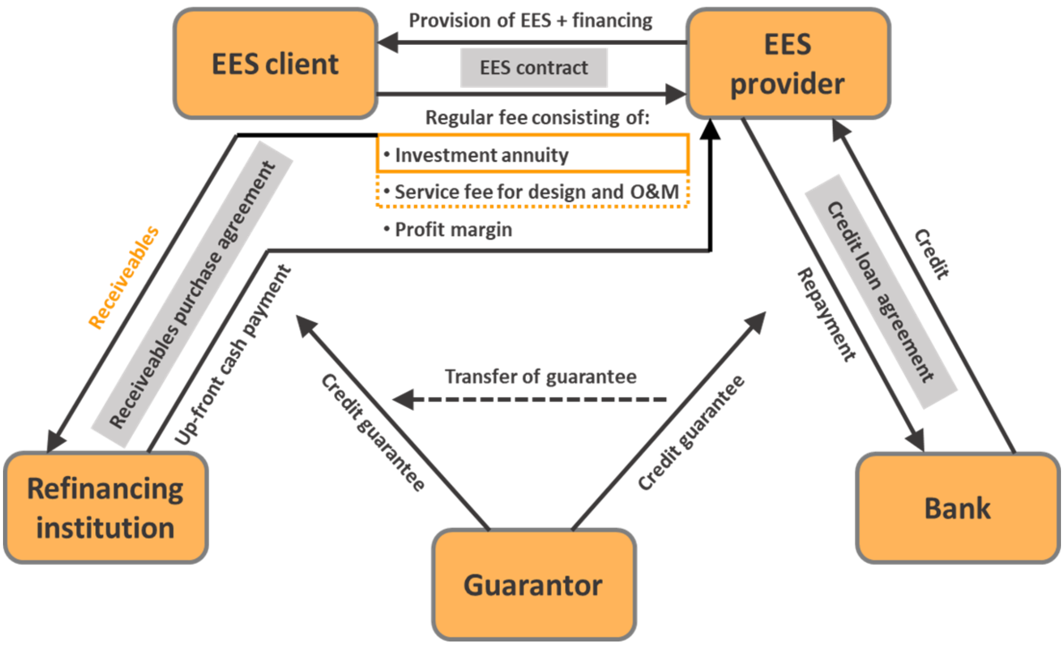


As financiers, EES providers find themselves in a role where they provide services out of their core business, but providing financing may become an important means of sales promotion and competitive advantage. Of course, **EES providers have to respect their own credit limits**, too. Depending on the financial capacity of the company, they will be able to finance only a limited number of projects without overstraining their credit limits. Furthermore, EES providers are not well prepared to carry the bankruptcy risk of their clients. This is mainly true for SME that represent of an important share of EES providers in most European countries.

3 REFINANCING OF EES – THE BASIC CONCEPT

Against the background as described above, refinancing models get increasingly important, containing all kinds of financing models that enable EES providers to clean up their balance sheet, thus gaining financial leeway for new projects and business growth. In many cases, in these models an **EES provider sells and a refinancing institution acquires receivables** to be paid by an EES client. If the refinancing model is well established, the full technical risk – including the risk related to the actual generation of cash-flow through energy savings – remains with the EES provider, whereas the refinancing institution takes over the credit risk at the side of the client. Furthermore, in some EU countries (e.g., Austria, Slovenia, Croatia, Germany) there exist specific intentions regarding the establishment of **public guarantee funds** for climate mitigation investments. Once these instruments are available, the credit risk to be carried by refinancing institutions will be further decreased.

The figure below describes **key steps of the refinancing process**.



4 BUSINESS OPPORTUNITY FOR FINANCIAL INSTITUTIONS

The establishment of refinancing schemes offers new business opportunities for financial institutions (commercial banks, investment funds, etc.), allowing financial institutions to channel their resources towards EE investment and to extend their **green financing portfolio**.

Within the REFINE-project **several case studies have been assessed** in detail. This assessment shows, for example, that refinancing of EES projects is a standard procedure in the Czech Republic with several commercial banks offering their services based on well-established and standardised contractual arrangements, whereby the clients are prevailingly from the public sector. A large Belgian bank is offering similar services for the Belgian EES market, whereas in Austria one major EES provider has established a refinancing solution together with an FI belonging to the same mother company. In Spain and Italy, a number of refinancing transactions has been implemented by a private fund manager investing in sustainable energy infrastructure. In Latvia a refinancing scheme has been developed specifically for residential building refurbishment (more details are available on https://refineproject.eu/).

Summing up from a financier's point of view, refinancing schemes offer the following advantages:

- Promising and future-oriented market of energy efficiency services with **large untapped investment potentials**: The below table presents on estimate of addressable market potential in the EU based on the PRIMES-study of the European Commission (2016).
- **Extension of the green finance portfolio** (beyond typical renewables projects)
- **Early mover advantage**: Although a handful of refinancing schemes is already in operation the competitive level is still low.
- Operational and **technical risks are extremely low**, because they are generally covered by the EES provider (savings are sometimes guaranteed), and at the point in time when refinancing happens the project has already run for a number of years.
- The financial institution carries only the **credit risk of the client** - and in future this risk could be further decreased by public guarantee funds.
- Transaction cost can be reduced through **bundling of smaller projects**, for example when the refinancing institution arranges a framework contract with the EES provider.

Table: Estimated market potential for refinancing of EES in the EU by 2030 (based on PRIMES 2016)

Target year 2030	**Investment Gap**	**Potential investment accessible by EES providers**		**Estimated share of EES projects refinanced [million EUR]**			
	[mil EUR]	[%]	[mil EUR]	**50%**	**60%**	**70%**	**80%**
Industry	4,000	30	1,200	600	720	840	960
Buildings – households	87,000	10	8,700	4,350	5,220	6,090	6,960
Buildings - tertiary	45,000	60	27,000	13,500	16,200	18,900	21,600
sum	**136.000**		36.900	**18.450**	**22.140**	**25.830**	**29.520**

5 WHAT DOES E7 OFFER

Establishing well-structured refinancing schemes for EES projects generates considerable preparatory cost for FIs. In the context of the REFINE-project, which is financed by the EU-program Horizon 2020, e7 is able to offer free-of-charge services related to the preparation of such schemes, including:

- **Conceptual templates of refinancing schemes** for different fields of application (public buildings, commercial buildings, SMEs/industry, multi-family houses).
- Access to **standardised contract templates** for the EES contract as well as for the refinancing contract.
- Participation in our **regular stakeholder workshops** providing the opportunity to get more detailed insight into refinancing concepts and already applied schemes.
- **Matchmaking with EES providers** with the aim to negotiate standardised frameworks allowing for bundling of smaller EES projects.
- Access to a financial **rating scheme** regarding the risks of EES projects and their preparedness for refinancing.
- Participation in **pilot applications** where FIs can test developed instruments and tools and implement refinancing schemes in close cooperation with the REFINE team.

We are available for further inquiries and consultations. Please contact klemens.leutgoeb@e-sieben.at