FINANCIAL BARRIERS TO THE GROWTH OF THE ESCO INDUSTRY AND HOW TO OVERCOME THEM

Klemens Leutgöb, e7

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REFINE

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Starting conditions – the perspective of clients

- Many studies confirm the existence of huge amounts of economically attractive, yet untapped potential for EE-projects.
- Energy and climate crisis request for investments into decarbonization (risk avoidance becomes more important)
- Many different barriers at the side of clients (facility owners)
  - lack of information on potential
  - Limited interest in the topic
  - lacking personnel resources
  - lacking trust in EE experts

→Limited access to finance is just one of the barriers

…. but financial barriers exist…

Financial barriers at clients' side – Sectoral assessment

Household clients will reconsider whether they can afford the thermal refurbishment of their home and may decide to postpone the EE investment because other funding needs are more urgent.

Corporate clients analyse the impact of the EE investment on the key credit figures and even if they are economically viable, they will usually give preference to core-business investment options.

Public clients (municipalities, regional and federal authorities, etc.) are tied by budgetary constraints and EE investments compete with other investment needs.

Starting conditions – Financial institutions

Supply of financing:

- They are many financial institutions (FI) that have formulated strategic focus areas around green and sustainable financing
- But – in contrast to investments in the renewable energy sector – FIs perceive serious shortcomings in EE investments
  - EE investments are complex and integrated into other economic activities
  - EE investments are granular and comparably small
  - EE investments are “brain-driven”
  - Cash-flow comes from savings and not from sales on the market

→ Where can we find the right channels through which the supply with **additional** capital could really stimulate market growth (beyond ordinary company loans or mortgage loans)

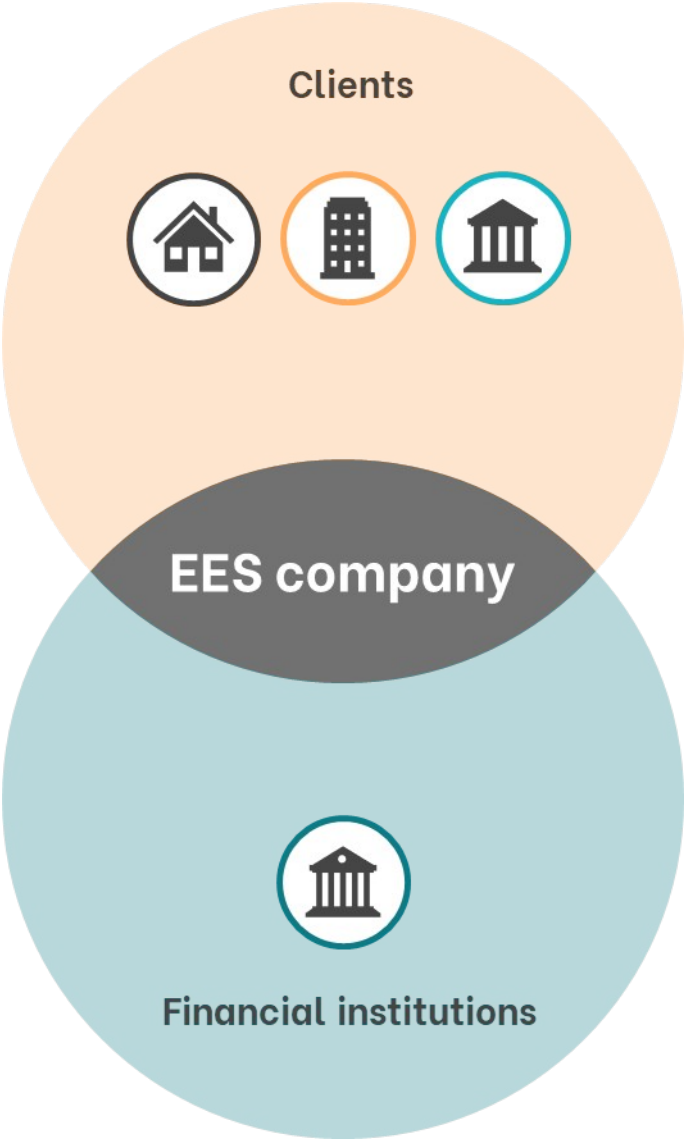
Starting conditions – EES providers

EES providers as „bridge“ between potential EE clients and financing institutions

- EES providers can prefinance the investment and get repaid through yearly remunerations which are dependent on the actual savings achieved (Third Party Financing)
- Either the client or the EES provider (ESCO) have the investments in their balance sheets.

→ **EES providers may soon reach their own credit limits and will have to reject further EE projects**

→ **Financing may become a barrier for further growth**



Sectoral assessment of market trends related to EES

	Low to medium intervention depth	High intervention depth (Deep renovation)	Exchange of heat supply (decarbonised)
Residential buildings (MFH)	→	↗	→
Public buildings and facilities	→	→	→
Commercial buildings (real estate companies)	→	↗	→
Commercial buildings (user-owned)	→		→
SMEs / industry		-	

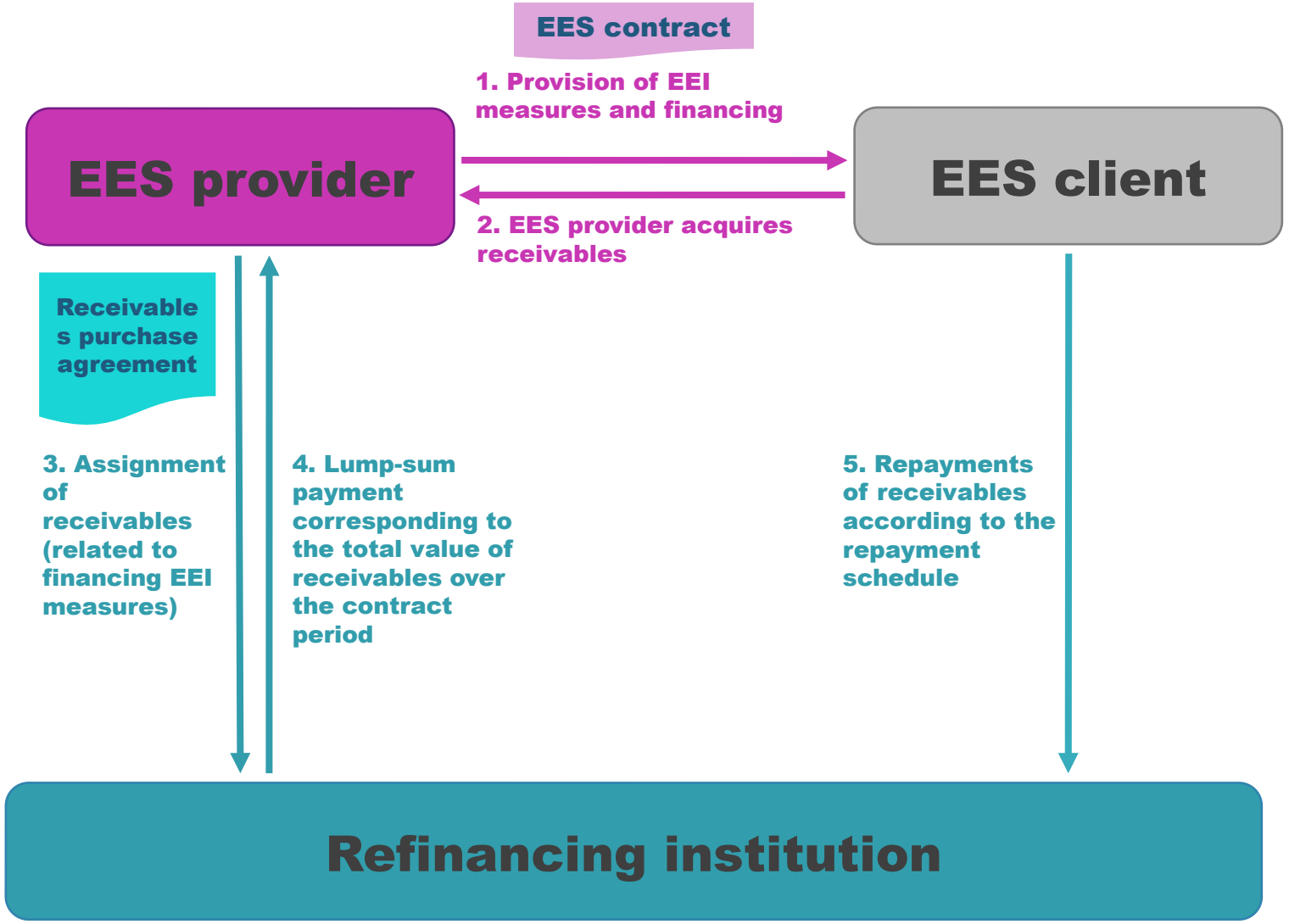
Sectoral assessment of demand for EES provider's finance

	Low to medium intervention depth	High intervention depth (Deep renovation)	Exchange of heat supply (decarbonised)
Residential buildings (MFH)	-	**high**	**high**
Public buildings and facilities	**remains high**	**high**	**high**
Commercial buildings (real estate companies)	low	low	low
Commercial buildings (user-owned)	medium	**high**	**high**
SMEs / industry	medium	-	medium

Access to growth finance for EES providers

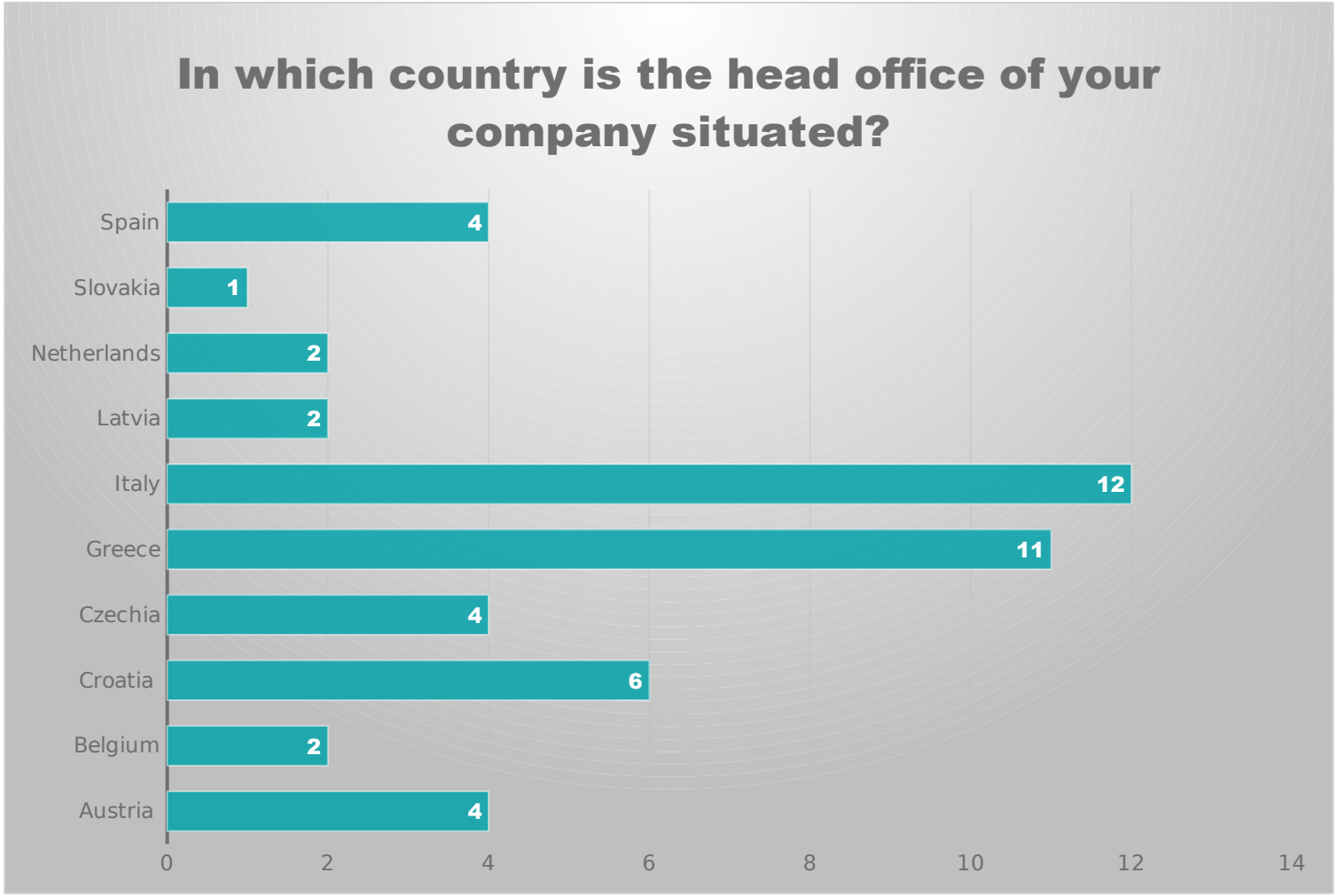
- Different forms of corporate financing
  - Equity – high expectations of profitability
  - Loan financing - limited by credit ratios
  - Corporate bond / mezzanine financing
  - etc.
- Leasing financing
  - applicable only for parts of the project: leasable goods
- Project Financing
  - practically impossible, since EES projects are usually too small
- Refinancing Schemes / Sale of receivables

Refinancing schemes – how do they work?

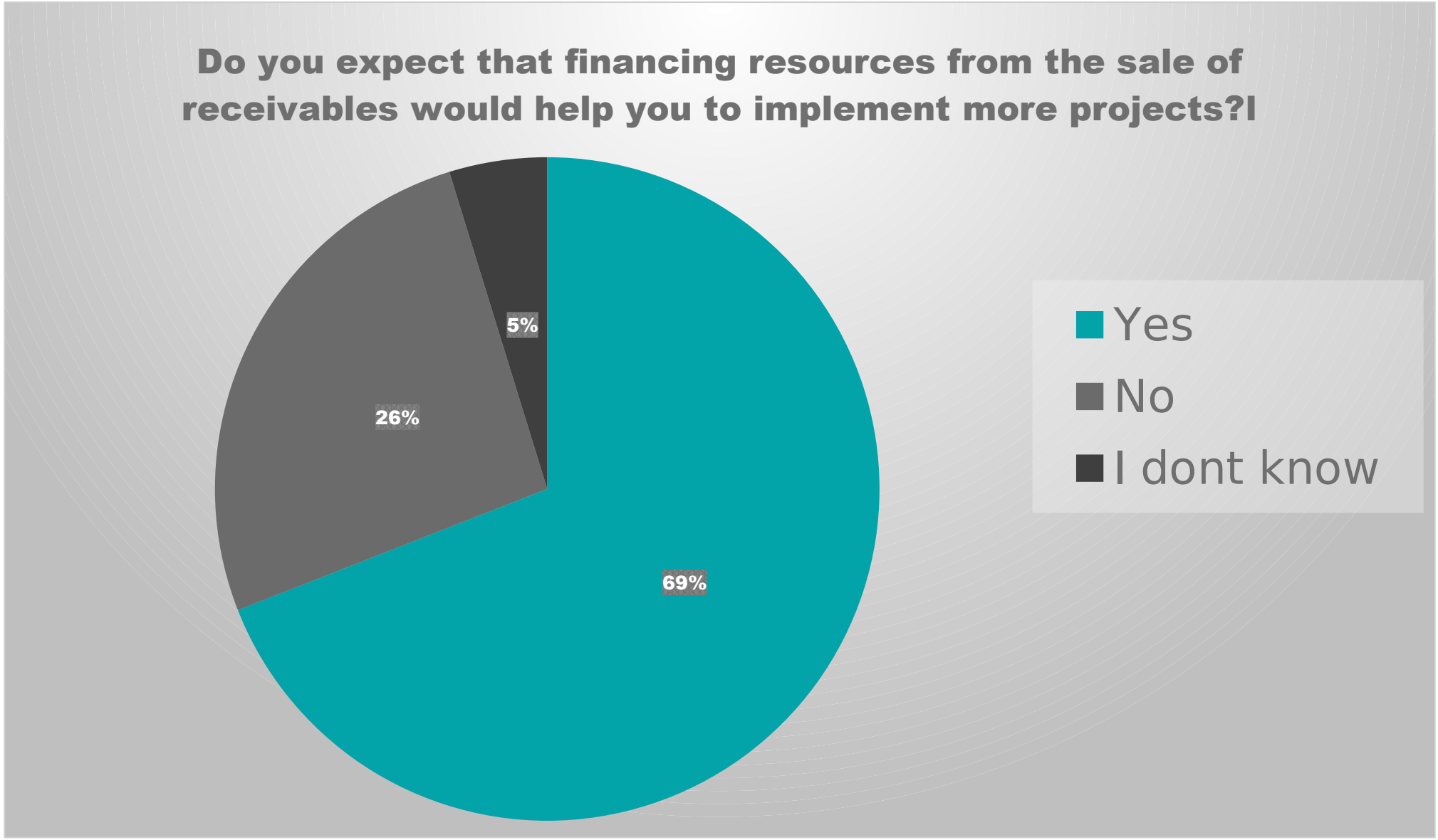


REFINE Survey: Overview on participating EES providers

- The Survey was conducted between January and May 2022
- Observations: 48
- Countries: 10



REFINE Survey: Interest in refinancing by EES providers



REFINE Survey: Main Conclusion

- For many EES providers credit financing is the easiest financing instrument, and thus most used. However, also refinancing approaches are commonly used among some of the EES providers participating in the survey.
- A clear majority of all participants is (generally) interested in (re)financing current and future EES projects by sales of receivables.
- Participants that are interested in sales of receivables as a financing instrument are to a large extend SMEs (more limited in access to other instruments of company financing)
- Especially the participants from the Italian and Spanish EES markets estimate the average yearly volume of sales of receivables from future EES projects in the range of 1 million € up to over 4 million €.

Overview of refinancing schemes in selected EU MS

Sale of receivables

The scheme is **used for the implementation of technology measures** for Energy Efficiency Improvement in the field of building technologies, equipment etc. typically, under EPC contracts.

Contract duration is between 8 and 14 years.

Usually **oriented to** public clients or private clients with a very good reputation.

Building renovation as a service

The BEEF model is **centred on financing building renovation as a service** and it provides refinancing for **comprehensive building refurbishment** with EPC+ or EPC++ contracts.
BEEF is SPV managed by specialised fund managers.

Contract duration is between 20 and 30 years.

Oriented towards the residential building sector.

Basic categorisation matrix of refinancing schemes

	Deep renovation	EEI measures / EPC	Energy supply / ESC
Residential buildings (MFH)	A1	(B1)	C1
Public buildings / facilities	A2	B2	C2
Private non-residential buildings	A3	B3	C3
SMEs/industry	(A4)	B4	C4

No one-fits-all approach because of different priorities of the clients!

Scheme A2: Comprehensive public building refurbishment (Example)

Element	Description
Application field	Comprehensive refurbishment of public buildings
Market opportunities	Generally, we observe that public building owners tend to implement comprehensive refurbishment projects in a conventional way by “self-implementation” as long as they can afford. Therefore, we assume that an EES targeting at this application field is attractive mainly to smaller public authorities (municipalities) that lack proffessional real estate management. For larger portfolios, an EES may lead to a pull-forward effect, i.e. the number of comprensive investment projects per year may increase.
Collateralisation	The need for collateralisation may be low, depending on the creditworthiness of the public authority. A public guarantee to cover credit risks would be the easiest and probaly most cost-efficient way to safeguard payments to the refinancing institution.
Handling of performance risks	Long-term collaboration with EES provider Refinancing only after 1-2 years of verified performance Only up to 80% of the recievables are purchased Step-in rights of refinancing institution
Collection of payments	EES provider will be responsible for invoicing – a certain part of the invoiced amount is payable directly to the refinancing institution
Off-balance sheet financing	(Most probably) not relevant
Non-public debt financing	It would be an attractive driver for public authorities to get offers that fulfil the EUROSTAT requirements without causing high extra-cost, but according to our understanding this seems to be difficult given the current framework conditions
Organisational set-up	Institutional set-up with predefined roles, responsibilities and work processes is recommended because of high capital investments.

Scheme C1: ESC for residential multi-family buildings (Example)

Element	Description
Application field	Installation of central heat supply system based on RES for MFH
Market opportunities	ESC is already offered for new construction of buildings and larger neighborhoods. In addition, decabonisation of existing building stock represents huge market potential, but suffers from a number of barriers: legal framework, investor-user-dilemma, affordability limits at the side of home-owners. We assume that the most attractive market segments for ESC – as compared to self-implementation by the owners - will be condominium houses, where there are some affordability limits and where the regulatory framework facilitates decision processes as much as possible (co-decision rights, obligation to tolerate investments etc.). At the same time, we assume that there is a need for public support (investment grants) to push forward these kind of investments.
Collateralisation	Usually, pricing in ESC models differentiates between the investment part and the operational part (heat delivery). Therefore, refinancing can be connected with the assets, where the refinancing institutions gets transferred the title on the assets from the EES provider.
Handling of performance risks	Long-term collaboration with EES provider Refinancing only after 1-2 years of verified performance Only the receivables connected with the assets are purchased Step-in rights of refinancing institution in case of serious under-performance of the EES provider
Collection of payments	Through the EES provider or through the housing management company as part of the operating costs statement
Off-balance sheet financing	Not relevant
Non-public debt financing	Not relevant
Organisational set-up	Institutional set-up with predefined roles, responsibilities and work processes

Standardised stipulations for refinanceable EES contracts

- Required stipulations in the **EES contract** to ensure refinanceability
  - Mandatory stipulations, such as
    - Guaranteed Savings & Handling of performance Risk
    - Client Obligations
    - Early termination
    - Dispute mechanisms
    - etc.
  - Enhancing stipulations

- Recommended stipulations in the **refinancing agreement**
  - Correspondence, legitimate and not otherwise compromised
  - Non–recourse clause
  - EES provider´s liability for underperformance
  - Title to equipment
  - Financial information
  - Step in Rights
  - etc.

Refinanceability Rating System

- **3 different risk levels** involved in the assessment of an EES project when a FI assigns an overall rating from a **payment default point of view**
  - L1 Standard Financial Institution Default Risk Evaluation
  - L2 EES Project Risk Evaluation
  - L3 Assessment of Refinanceability (Availability of required contract stipulations)
- **Expert Rating System**
  - Qualitative levels (Low-Medium-High)
  - Weighted, descriptive risk items
  - Mitigant incorporation
  - Final Score – Global Score

EE PROJECT RATING **3,16**

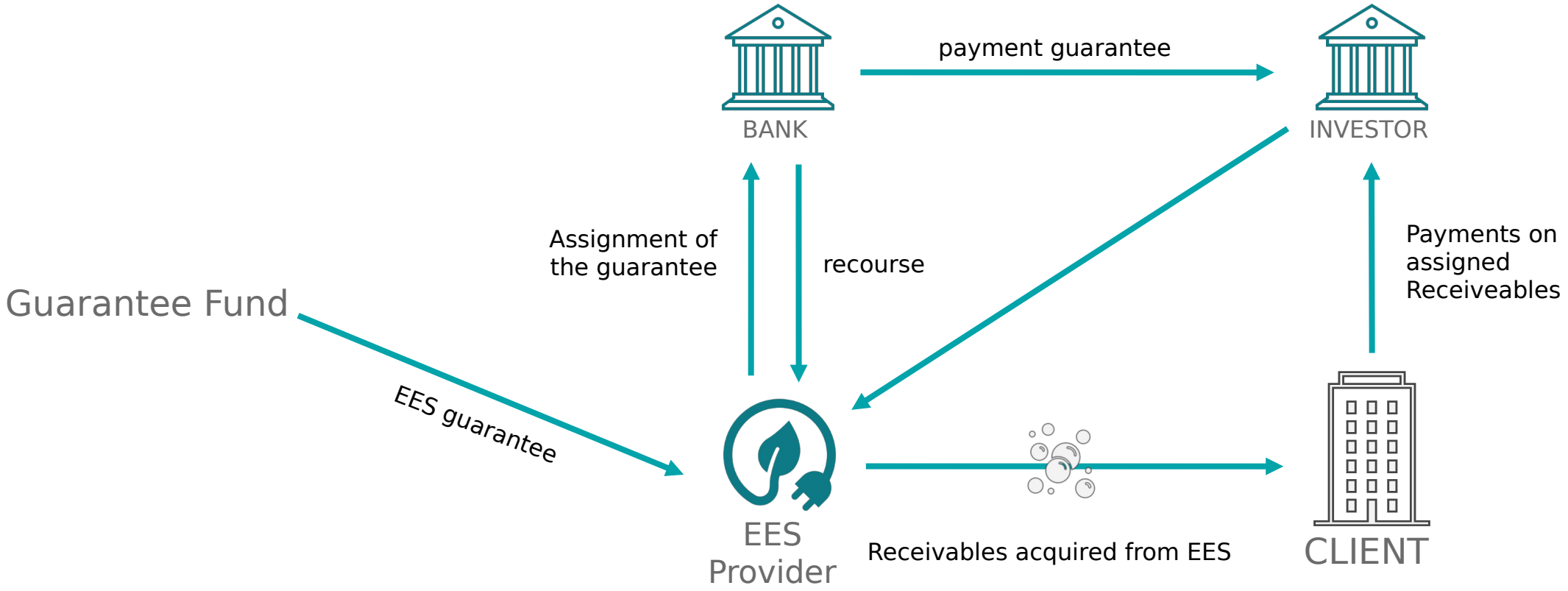
The following template lists a series of items that impact in the Energy Eficiency Project Rating.
For each of those items, the user must pick wether a "Low", "Medium" or "High" Risk applies. If a Mitigant (factor that decreases the risk level) applies in any item, it should be described in order to modify the Item Final Risk Score. (*The cells selected in the example are marked in a grey color*).
The risk relative weight assigned to any of the categories, and to the risk items within, may be changed based on the expert crtieria of the valuator.

			5	3	1				
Risk Item	**Weight**	**Description**	**Low Risk**	**Medium Risk**	**High Risk**	**Initial Score**	**Mitigants**	**Final Score**	**EES Clause (L4)**
EES Provider	**30%**							**4,6**	
Experience as an EES provider / in Energy Efficiency Services	30%	It refers to how experienced is the company in the energy services sector.	Experienced	Not very experienced	No experience	5		5	N/A
The EES provider is experienced in the segment in which the EEP is implemented and projects of that size	20%	It refers to how experienced is the company in the sector in which the energy efficiency project is implemented (buildings, lighting, mobility, etc.) and in the management of projects of similar size.	Experienced	Not very experienced	No experience	3		3	N/A
The EES provider has experience with the applied technology	20%	It refers to how experienced is the company with the technology used to implement the EES contract	Experienced	Not very experienced	No experience	5		5	N/A
EES provider incentive level	30%	It refers to the level of incentive of the EES provider to actually achieve the promised savings	Remuneration of EES provider fully adheres with saving guarantee and is safeguarded by an additional bonus for over-performance and an extra penalty for underperformance	Remuneration of EES provider fully adheres with saving guarantee (but no extra safeguards)	Shared savings model	5		5	N/A
PROJECT	**60%**							**2,4**	
Instalation - Protection	10%	It refers to the extent in which the equipment or instalation is protected and maintained in order to obtain the project´s energy savings.	Equipment Insurance/Warranty - provided for 90% of period.	Equipment Insurance/Warranty - provided for just the first years of the project.	Equipment Insurance/Warranty - not provided.	5		5	7, 9, 10
Instalation - Collateralization	5%	It refers to the extent in which the equipment can be used as a guarantee or collateral in a refinancing operation.	Equipment can be collateralized totally	Equipment can be collateralized partially	Equipment can´t be collateralized	1		1	8
Instalation - Technology	15%	It refers to the extent in which the best available technology is applied in the project..	The technology used in the project is widely applicable/tested	The technology used in the project is fairly new	The technology used in the project is completely new	1		1	N/A
Reliability of savings calculation	30%	It refers to the existence of a M&V plan according to accepted standards (timing, calculation algorithms, stakeholder responsible, etc.)	A detailed state-of-the-art M&V Plan is in place from the beginning of the project	The cornerstones of M&V are mutually agreed, but details need to be agreed during project operation	There is no M&V Plan in place	3	Third independent expert party verification of the savings calculation / Savings Guaranteed	1	1, 2, 11, 23
Operation and Maintenance	15%	It refers to who is the company that will perform the Operation and Management of the installation throughout the EES contract duration.	The EES provider that made the installation or a subsidiary or a related company.	A different company, with a good track record in Energy Efficiency project O&M	A different company, with no track record, or the end client itself	3		3	4, 5, 12
Cash flow/ Credit Ratio	10%	It refers to the cash flow generated by the savings being able to cover the payments throughout the EES contract live duration.	Cash flow covers 120% or more of the payments due	Cash flow covers between 100% and 120% of the payments due	Cash flow covers less than 100% of the payments due	3		3	3, 18, 24

REFINEE

FORFAITTING FOR THE CAPITAL MARKET WITH CONTRACTING GUARANTEES

- Contracting guarantees can also be used as a basis for structuring payment guarantees from the house bank for the sale of receivables to investors on the capital market:



Key take-aways

- Refinancing schemes are an important market booster to realize the well-known huge potential of cost-efficient EE investments
- Refinancing schemes enable EES providers to grow in promising market segments where the client gets attracted by a financing offer of the EES provider
  - capital intensive investments related to decarbonization of the building sector (residential, public, selected commercial buildings)
- No one-fits-all approach – need to adapt the schemes to the requirements of the specific application fields
- Major challenge is to keep transaction cost and risks low trough standardization of tools and processes

CONTACT

Klemens Leutgöb
klemens.leutgoeb@e-sieben.at
Tel: +43 1 907 80 26 –51
Mobil: +43 676 76 13 251

e7 energy innovation & engineering
Walcherstraße 11/43
1020 Vienna
www.e-sieben.at

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