

FALCO "Financing Ambitious Local Climate Objectives"

Webinar on financing solutions 30 11 2020



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Financing







Climate objectives







Ambitious objectives







Local objectives







Financing

Ambitious





Climate Objectives







The FALCO Consortium













FALCO developed financing solutions in 3 sectors



Acceleration of renovation & deeper renovations in private houses



Acceleration of renovation & deeper renovations of **public buildings**

Energy efficiency investments in **SME's**

DBP4





Barriers and solutions matrix

General barriers for climate investments

Scale		Return deemed insufficient		Cashflow problem		creditworthiness is insufficient		Status quo of credit position/lending capacity		Economic lock-in		Financing project development costs										
Ē	Ë	Ĕ		Financing solution																		
X	x	x	1	Aggregation/Bundling	+++	++	+	+	+	+	+	+++	+++	0	0	0	0	++	++	++	++	++
x	~	~	2	nu acung – convacting	+	++	+++	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	*	×	3	Deforment of novment of revenues from sale of FLLA to industry	0	+	++		+	+	0		-	0			0	0	-	+	+	-
×	×	÷		Guarantee – Credit risk	+				0	0	++	++	++	- -	0	0	0	- -	0		0	
x	x	-		Performance guarantee – performance risk	+	++	+++	+	+	+	+	+	+	0	0	0	0	0	0	+	+	+
x	x	_	7	Third party financing	0	0	0	+	+	+	0	0	0	+	++	++	+	+	+	+	+	+
	x	x	8	Retention of subsidies	0	0	0	+++	+++	+++	++	'++	++	0	0	0	+	+	+	+	+	+
	×	x	9	Credit Default Swap	0	0	+	0	0	0	0	+	++	0	0	0	0	0	0	0	0	0
x	x		10	Optimisation of use of real estate	+++	+++	+++	++	++	++	+	+	+	+	+	+	+	+	+	+	+	+
	x	x	11	Compensation mechanism (flexibility mechanism)	++	++	++	0	0	0	0	0	0	+	+	+	+	+	+	0	0	0
x	x		12	Sale & lease back	0	0	0	++	++	++	++	++	++	+	+	+	++	++	++	+	+	+
x	×		13	Usufruct & lease back	0	0	0	++	++	++	++	++	++	+	+	+	++	++	++	+	+	+
	x	x	14	PACE (Property Assessed Clean Energy)	0	0	0	++	++	++	++	++	++	++	++	++	+	+	+	0	0	0
	×	x	15	On-bill financing	0	0	0	**	++	++	++	++	++	**	++	#	+	+	+	0	0	0
×			16	Factoring	0	0	0	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0
×	x	x	17	Securitisation	+	+	+	++	++	++	0	0	0	++	++	++	+	+	+	0	0	0
×			18	Forfaiting	+	+	+	++	++	++	0	0	0	++	++	++	+	+	+	0	0	0
	×	x	19	Domestic offset projects	+	+	+	+	+	+	0	0	0	0	0	0	0	0	0	+	+	+
	x	x	20	Green investment scheme/domestic greening	+	+	+	+	+	+	0	0	0	0	0	0	0	0	0	+	+	+

>40 Building blocks for financing solutions





FALCO – Objective of this webinar

- Explaining the financing solutions for each of the sectors
 - ER2.0: renovation of private houses
 - Third Party Financing via ESCO's
 - Public buildings: SPREM as basis for deep renovation
- Gain insight in the situation for these sectors elsewhere in Europe (interactive part)
 - What solutions are you applying?
 - Are parts of the proposed solutions helpful in your situation?
- How?
 - Go to <u>www.menti.com</u>
 - Enter code: 91 56 81 9



Please enter the code







ER2.0 Energy efficiency loan 2.0

By Luc Wittebolle – SuMa Consulting Lucwittebolle@sustainable marketsconsulting.com



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Mentimeter

• Questions:

- Monthly instalment an average family is willing to pay
- Market situation for personal loans for energy renovation
- Does the renovation sector contributes in financing solutions technical assistance?





Energy renovation loan 2.0 (ER2.0) Key features and rationale

- Personal loan for energy renovation & ancillary investments
- Golden quadrant / triangle of *deep* energy renovation :
 - 0) low interest rates : taken care of by market
 - 1) low monthly installments => loan period up to 20 years
 - 2) adapted to investment amounts => loan of up to 50KEUR
 - 3) managing complexity of combining measures : technical assistance service
 Combination not available on the market
- Target group:
 - Loan approval criteria aligned on average income households
 - Low-income households that do not meet loan approval criteria may be granted a loan subject to an additional guarantee covering credit default risk









(1) Origin of the Fund's financial means

- Equity:
 - public sector local or regional authorities
 - Double dividend investors (return = financial and economic/societal return)
- Debt :
 - EIB and/or commercial banks
 - Equity debt ratio : 1/5
- Use of funds: local authorities drawing rights prorata their equity in the Fund
- Leveraging (local) public funds:
 - Minimum 1/5
 - + Third party equity (region/provinces)
 - + rolling fund + refinancing => investments cycles





(2) ER2.0 loan contract

Main features

- personal loan, for energy efficiency investments (and ancillary costs<50%); up to 20 years, upto 50Keuro, technical assistance
- Directly between the Fund and Borrower
- Standardised acceptation criteria (scoring system)
- Standardised contractual provisions
- Compliance with standardised acceptation criteria = basis for solidarity between shareholders => no deviation from credit acceptance protocol
 - Deviation only possible if matched by an additional guarantee (optional de-risking instrument)
 - May be particularly relevant for appartment buildings





(3) Role of energy houses

- Single point of contact with client
 - Communciation throughout the 'client journey'
- Provide technical assistance to clients (three levels):



• Broker for the Fund (financial intermediary)





(4) Additional revenues

- Required to ensure long term viability of the technical assistance support
- Monetarisation of co-benefits
- Examples
 - Membership Card System (MCS) market test
 - Elena or local/regional subsidies
 - CO2 compensation credits
 - Monitisation of co-benefits

— ...





Rebate = 500 euro

 $\Rightarrow~$ 250 euro of the rebate directly accrue to the Client

 \Rightarrow The remaining 250 euro to be shared between ER2.0 fund and energy houses

In practice : invoice of 9.750 euro is debited from Client's loan account, in consideration of free technical assistance support.





(5) Refinancing (add-on)

 Goal : increase pace of the 'rolling' of the fund + transfer part of the risk to the market

Requires :

- sufficient large loan portfolio (50 to 100 Meuro depending on instrument)
- standardised contracts & acceptance conditions (reduces transaction costs)
- track record : impeccable loan performance (after 2 to 3 years)
- Alternative instruments, for example :
 - securitisation via SPV financed by green bond
 - covered notes/bonds (no separate entity)

- ...





(6) The fund and its Partners

• Fund

- Shareholders (equity)/ lenders (debt)
- Board of directors (strategic management)
- Investment committee (investment decisions)
- Fund manager (operational management / coordinator)

Partners

- Energy houses (front office)
- Servicing company (back office)









Something for you?

- Equity : around 10 Meuro tot start with (remark : exit strategy)
- Volume of loans (a large city, a region or cluster of medium cities): start with >1.000 loans per year.
- Technical assistance capacity: do you already have a trusted local TA provider?
- Lead time = 3 to 4 years: long but multipurpose and scaleable solution e.g. solution for appartments, low-income borrowers
- Additional revenues to cover the technical assistance cost (short term and long term solutions)

Interested ? The European City facility (EUCF) can help you with preparing the replication of ER2.0 in your region/country

See https://www.eucityfacility.eu/home.html





Mentimeter

- Statements about implementing the ER2.0 solutions
 - 1 = strongly disagree
 - 2 = tend to disagree
 - -3 = tend to agree
 - 4 = strongly agree





Third party financing via ESCO's to boost energy-efficiency

By Antoon Soete – 3E/Wattson Antoon.Soete@wattson.be



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- Question:
 - Have you already engaged ESCO's to speed up energy efficiency investments in your municipality?





Introduction

- To realize ambitious CO2-reductions by 2050, substantial boost in energy-savings is required
- Significant gains still to be realised in the built environment (+/- 40% of current CO2-reductions)
- Third party financing via ESCO's might be a potential promising strategy
- However the actual design of ESCO-projects is a crucial element to achieve substantial energy-savings.
- Third party financing is "client-neutral": can be used by public authorities as well as by private companies





EPC: do's & don'ts: how can we boost EPC-business?

Watch out with energy savings projects!



Illustrative case

- Nursing home
- Built in 1990ies
- Energy cost of 70.000 euro/year
- Relighting program already established
- Typical energy savings potential of 30% when 150.000 euro is invested
- Contract of 10 years







Blocking points to realize EPC in this nursing home

Different elements explain why EPC is difficult to realize

- Scale <> individual projects
- Lack of an integrated approach
- Renewables to leverage energy efficiency
- ESCO's <> on balance financing





Pooling of different elderly homes improves business case

Scale is important for bankability & risk mitigation







Portfolio versus individual cases

Higher red tape (acquisition time, design,...) individual versus portfolio approach

сарех	2.000.000	2.000.000
design fee	10%	25%
Available for effective investment in energy savings measures	1.800.000	1.500.000
Target payback of 8 years	251.572	251.572
Payback of energy savings measures	7,16	5,96
Delta		-1,19
Energy Savings measures with payback < 3 years	20%	30%
Energy Savings measures with payback < 5 years	20%	25%
Energy Savings measures with payback < 8 years	34%	35%
Energy Savings measures with payback < 10 years	15%	10%
Energy Savings measures with payback < 12 years	11%	0%
	100%	100%



Inner circle : transaction cost 10% of total capex Outer circle : transaction cost 20% of total capex





Portfolio versus individual cases

Individual approach results in a higher WACC -> lower paybacks required

		portfolio	individual
	budget	realized	savings
unit 1	100,000	50,000	50,000
unit 2	100,000	80,000	80,000
unit 3	100,000	100,000	100,000
unit 4	100,000	100,000	100,000
unit 5	100,000	100,000	100,000
unit 6	100,000	100,000	100,000
unit 7	100,000	100,000	100,000
unit 8	100,000	100,000	100,000
unit 9	100,000	120,000	110,000
unit 10	100,000	150,000	125,000
total	1,000,000	1,000,000	965,000

		portfolio	individual
	budget	realized	savings
DSCR	1.3	1.3	1.3
totaal	769,231	769,231	742,154
Debt	6,561,696	6,561,696	6,330,724
% Debt	65.0%	65.0%	62.7%
Equity	3,533,221	3,533,221	3,764,193
Total investment	10,094,918	10,094,918	10,094,918
ROE	7.00%	7.00%	7.00%
WACC	4.00%	4.00%	4.49%





Blocking points to realize EPC in this nursing home

Different elements explain why EPC is difficult to realize

- Scale <> individual projects
- Lack of an integrated approach
- Renewables to leverage energy efficiency
- ESCO's <> on balance financing





Integrated approach = key

Combination of several technological solutions is required to achieve significant energy cost savings

Wattson mixes

- Wattson combines various energy saving techniques in different buildings into a single package with an average payback period of about 8 years resulting in a total energy saving of approximately 30% (based on a 10 year contract)
- Wattson proposes a **smart combination** of so called "obvious" solutions (such as relighting) with financially more challenging, but very environmentally friendly techniques (such as boiler renovation & insulation)







Low hanging fruit is required to reach an acceptable payback

Details of a technical & financial analysis






Blocking points to realize EPC in this nursing home

Different elements explain why EPC is difficult to realize

- Scale <> individual projects
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Renewables to leverage EPC

P90 values are more stable when renewable energy is included – increases bankability of Energy-efficiency projects

Measures	Uncertainty on revenue stream	EE only	Savings budget	P90	EE/RI	Savings budget	P90
PV	95%	0%	0	0	4	0% 400,000	380,000
Energy savings: variable	70%	100%	1,000,000	700,000	6	600,000	420,000
Total		100%	1,000,000	700,000	10	1,000,000	800,000
DSCR			1.3	1.05		1.3	1.05
Annuity			769,231	666,667		769,231	761,905
Debt			6,561,696	5,686,805		6,561,696	6,499,204
			65%	65%		65%	65%
Bankable investment level		(10,094,918	8,748,930		10,094,918	9,998,776
				-1,345,987			-96,142





Blocking points to realize EPC in this nursing home

Different elements explain why EPC is difficult to realize

- Scale <> individual projects
- Lack of an integrated approach
- Renewables to leverage energy efficiency
- ESCO's <> on balance financing





ESCO takes care of:

- design,
- Investment
- Financing (on balance)
- Operations
- Energy savings warranty





Sales of receivables : possible alternative for smaller EPC-projects

ESCO responsible for energy savings risk; off-balance; service fee = performance-based



Financial party takes the credit risk





Sales of receivables : possible alternative for smaller EPC-projects





Sales of receivables : possible alternative for smaller EPC-projects

Scheme has been used to realize a substantial energy renovation program in a school

Alle bedragen inclusief BTW per jaar		1	2	3	4	5	6	7
totaal CAPEX en aflossing (in jaarlijkse annuïteiten)		-70,955	-70,955	-70,955	-70,955	-70,955	-70,955	-70,955
totaal asbestverwijdering en aflossing exclusief subsidie OVAM		-5.707	-5.707	-5.707	-5.707	-5.707	-5.707	-5.707
onderhoud en beheer van de installaties		-25,423	-25,932	-26,450	-26,979	-27,519	-28,069	-28,630
korting onderhoud en beheer		3,639	2,363	1,058				
totaal		-98,446	-100,230	-102,054	-103,641	-104,181	-104,731	-105,292
totale geschatte jaarlijkse besparingen		88,246	89,826	91,442	93,094	94,782	96,508	98,272
gemiddelde van de huidige onderhoudskosten		10,200	10,404	10,612	10,824	11,041	11,262	11,487
totaal		98,446	100,230	102,054	103,918	105,823	107,770	109,758
DELTA (netto huidige waarde @ 2,2% / jaarlijkse delta)		0	0	0	277	1,642	3,039	4,466
interval energiebesparingsgarantie - (tov totale geschatte jaarlijkse besparingen)		79,421	80,844	82,298	83,785	85,304	86,857	88,444
interval energiebesparingsgarantie + (tov totale geschatte jaarlijkse besparingen)		97,070	98,809	100,586	102,403	104,261	106,159	108,099





What should you do as a government to boost energy savings?

- If you consider to engage third party financing, then:
 - Launch portfolios of buildings instead of single buildings consider energy-savings at portfolio level
 - Watch out with focussing yourself on low hanging fruit since this might block ESCO's to step in a later phase
 - Focus on Trias Energetica: renewables and energy saving should be considered together; focus on resultdriven procurement
 - To stimulate new parties entering the ESCO-market, consider off balance-solutions for ESCO's complemented with guaranty schemes/forfeiting fund in case SME's are targeted.





Mentimeter

- Statements about considering solutions when considering third party financing via ESCO's
 - 1 = strongly disagree
 - 2 = tend to disagree
 - -3 = tend to agree
 - 4 = strongly agree





A strategy for **deep energy retrofits** in buildings of local authorities

by Geert Goorden – Factor4 geert.goorden@factor4.eu





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the challenge : FALCO

- Many municipalities have midterm climate commitments, e.g. Covenant of Mayors, 2030
- Few have a (financial) plan how to reach the committed goals
- 2030 goals have an 'intermediate' level of ambition:
 > pro: robust business case, budget neutral
 > con: risk for technical and financial lock-in



- Few municipalities have long-term climate commitments / ideas, 2050
- Very few municipalities have a (financial) plan towards 2050
- 2050 objectives are ambitious
 : 'climate neutral'
 > pro : no risk for tech and fin lock in
 > con: very difficult business case







ambition levels

Various ambition levels at **building level**:

S0: low ambition = 10% reduction in energy use (*)

= 27%

"

"

"

- S1: average ambition
- S2: high ambition = 42%
- S3/S4: very high ambition = 80%
 = Deep Energy Retrofit (DER)

(*) assumption: reduction compared to BAU-scenario





Difficult business case of deep energy retrofits (DER)



NB figures for 100.000 $m^2\,$





Difficult business case of deep energy retrofits (DER)



Bron: FALCO, Factor4 (2018), met bijdrage door 3E





alternative thinking needed !

- Portfolio level
- Analysis in terms of functional real estate needs
- Optimize: reduce energy demand <> use local renew. energy
- Performance contracting
- Stretching budget neutrality
- ...







Mentimeter

- Statements about whether you recognise these challenges when renovating of public buildings
 - -1 = not at all
 - -2 = I don't think so
 - -3 = I think so
 - -4 = totally





proposed 'solution':

mixed bag,

Portfolio level

- Analysis in terms of functional real estate needs
- Optimize: reduce energy demand <> use local renew.
- energy
- Performance contracting





logical sequence >> structured approach !

- At strategic level: From building to portfolio level : Analysis in terms of
 - of functional real estate needs
 - of feasibility to make buildings futureproof

• At operational level:

- synchronize with technical life cycle of building
- reduce energy demand <> use local renewable energy
- new types of EPC contracting stretching budget neutrality





SPREM Sustainable Public Real Estate Management

 Organization's actual 'need' for buildings/space ?
 > optimize organizational processes accordingly (FM >> HR) (= 'SPREM')

Identify **redundant** / inappropriate buildings, and waste no longer money on them.

Use the generated income to invest in other building renovations instead

 Identify those buildings that cannot be made futureproof (e.g. structural, proximity to public transport, ...)





Natural renovation moments

- Be aware of bias : beyond energy and climate
- Energy considerations <<< other concerns



 Synchronize energy retrofits with natural renovation moments for other purposes (cf. technical life cycle of a building): fire safety upgrades, asbestos removal, solve accessibility problems

upgrade to new way of working (post Corona), etc);





accelerated vs. stepwise scenario





Accelerated scenario







Stepwise scenario







Impact on budget 2020-2050







Ultimate objective: schedule for each building 2020-2050









Energy efficiency / renewable energy (existing buildings !)

- Ultimate goal = carbon neutral built environment not: all buildings are energy neutral
- Strategic exercise: balance between investing in EE at building level vs. acquiring local (!) renewable energy; e.g. residual warmth, green gas, ..





Energy efficiency / renewable energy (existing buildings !)







Performance based contracting to implement actions

- EPC : presentation Antoon Soete
 - Pooling of buildings
 - Robust mix of EE and RES
- New developments in EPC ('New EPC'): Asset based maintenance (condition measurements cf. use NEN 2767
 - Deeper renovations possible while remaining budget neutral 42% energy saving instead of 'average' 35%





Take aways

- Dare to conduct a high level strategic exercise (SPREM) to assess an organization's actual need for buildings/space.
 Optimize organizational processes accordingly (FM & HR)
- Identify redundant buildings, and no longer waste money on them.
 Use the generated income to invest in other building renovations
- Synchronize energy retrofits with natural renovation moments for other purposes (fire safety upgrades, asbestos removal, upgrade to new way of working (post Corona), etc);
- Develop and compare various implementation **scenarios** (stepwise, accelerated, etc) and assess impact on budget and carbon emissions over time.





Mentimeter

- Statements about whether the proposed solutions might work for you
 - 1 = strongly disagree
 - 2 = tend to disagree
 - -3 = tend to agree
 - 4 = strongly agree





FALCO developed financing solutions in 3 sectors



Acceleration of renovation & deeper renovations in private houses



Acceleration of renovation & deeper renovations of **public buildings**

Energy efficiency investments in **SME's**

DBP4





Next steps The road to replication



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Assess replication potential

- Falco team meets local / regional team
- Focus: assessment of key success factors for replication
- Format :
 - one-on-one meetings with single city or cluster of cities with similar context
 - two to three webmeetings





European City facility (EUCF)

- = One option / window of opportunity
- EUCF can help you with preparing the replication of the presented financing solutions in your region/country :
 - municipalities and groupings thereof
 - fast and simplified call procedure
 - EUR 60,000 lump sum to develop relevant investment concepts related to climate and energy action plans
 - see <u>https://www.eucityfacility.eu/home.html</u>
 - remarks:
 - Next call announced for March/April 2021
 - We can support (at least)
 3 submissions for this 2021 call





Mentimeter

Give your name, mailadres and the topic(s) of your interest



Give your name, mailadres and the topic of your interest if you want us to contact you further in the replication potential exercise

Topic 1 = ER2.0 Topic 2 = Third party financing via ESCO's Topic 3 = Renovation of public buildings

Annick Gommers, annick@kenteradvies.be, topic 1

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Submit



Interested in a more profound exercise on the replication potential?

General inquieries

FALCO Coordinator Annick Gommers +32 485 49 28 29 annick@kenteradvies.be

Website

www.financinglocalclimateplans.eu

Inquieries on specific solutions (see below)

Energy Renovation loan 2.0

SuMa Consulting Luc Wittebolle +32 479 80 94 27 lucwittebolle@sustainable marketsconsulting.com Third Party Financing via ESCO's/forfeiting fund

3e/Wattson Antoon Soete +32 478 43 11 22 antoon.soete@wattson.be Financing local authorities' real estate portfolio

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