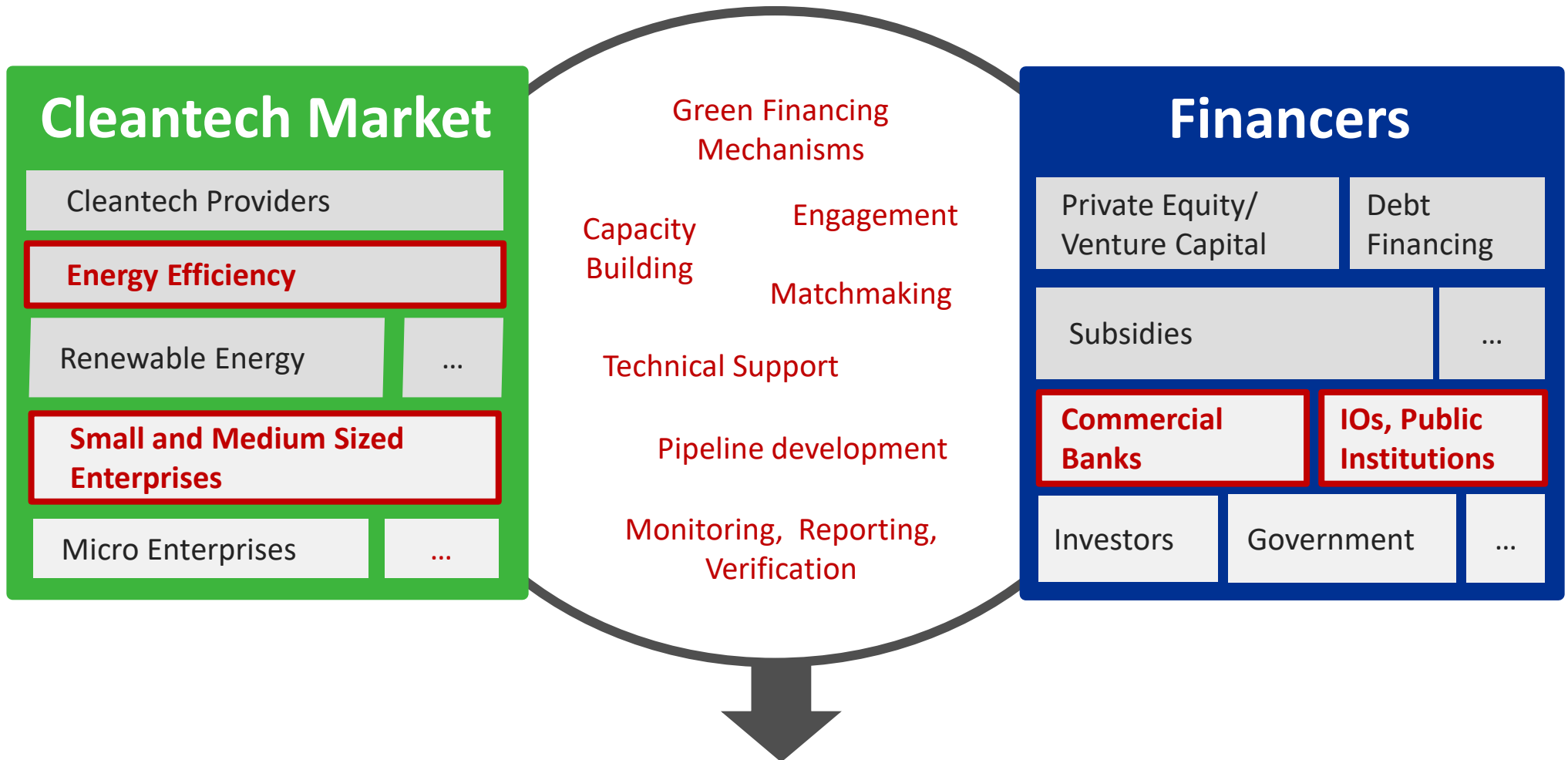




Cleantech Finance for SMEs in Europe

Overview of EU experiences and lessons learned

Mirko Zuerker, Senior Project Manager, adelphi



Growing the cleantech market in the EU

- **Cleantech finance in numbers (as of December 2015)**

- 
- Assets in accordance with integration of ESG factors – 63% of the global total
 - Signatories to the Principles for Responsible Investment – 47% of the global total
 - Signatories of the Principles for Sustainable Insurance – 35% of the global total
 - Signatories of the Equator Principles – 37 % of the global total
 - Climate Finance delivered in total at the end of 2014 – €14.5 billion

References

- Building a Sustainable Financial System in the European Union. (2016, March). Retrieved October 6, 2017, from http://unepinquiry.org/wp-content/uploads/2016/04/Building_a_Sustainable_Financial_System_in_the_European_Union.pdf

- SME reaction to cleantech /green finance**

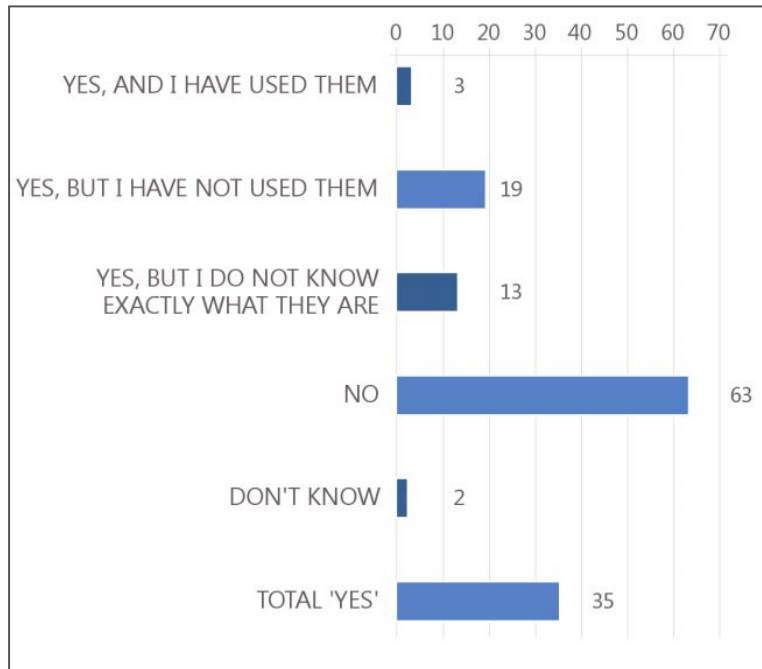


Figure. % of EU SMEs aware of financial incentives through government programmes supporting activities of circular economy between 2013-16 (Source: Flash Eurobarometer 441)

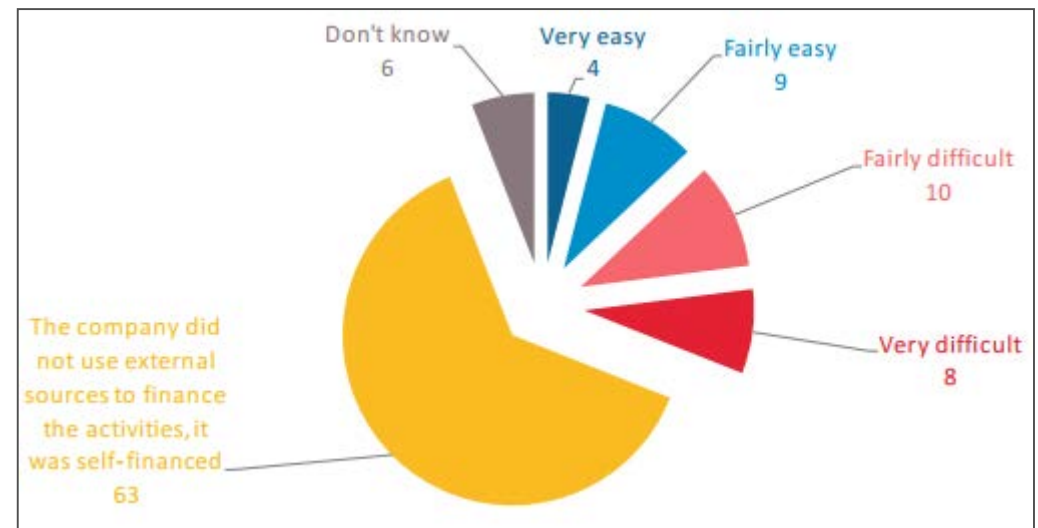


Figure. Ease of access to finance represented in % of EU SMEs that undertook at least one activity related to circular economy between 2013-16 (Source: Flash Eurobarometer 441)

References

- Flash Eurobarometer 441 Briefing note European SMEs and the Circular Economy. (2016, April). Retrieved October 5, 2017, from http://ec.europa.eu/environment/green-growth/docs/fl_441_sum_en.pdf



- **KfW Energy Efficiency Program - Production Plants / Processes (KfW-Energieeffizienzprogramm – Produktionsanlagen/-prozesse)**
 - Promotes energy efficiency measures in the area of production plants and processes of commercial enterprises in Germany and abroad.
 - Credit of up to €25 million and an interest rate of up to 20 years.
 - Additional offering – expert advice on energy efficiency, financial partner identification,

References

- KfW-Energieeffizienz programm – Produktions anlagen/ -prozesse. (2017). Retrieved October 09, 2017, from <https://www.kfw.de/inlandsfoerderung/Unternehmen/Energie-Umwelt/F%C3%B6rderprodukte/EE-Produktion-292-293/#>

- **Green Initiative**



- Support for energy efficiency projects by SMEs in EU new Member States and pre-accession countries through.
- EIB loans at attractive rates channelled through participating intermediaries. Grants from the European Commission (EC) up to 15% and €150,000 of the EIB loan amount
- The investment cost of a project should not exceed €25 million and the EIB loan should not exceed €12.5 million. The maximum implementation period of projects should normally not exceed 3 years.

References

- Green Initiative. (2017, October 07). Retrieved October 09, 2017, from <http://www.eib.org/projects/priorities/climate-and-environment/green-initiative.htm>



- **Pret Eco-Energie**

- This 'eco-energy loan' supports SMEs to implement programmes for improving their energy efficiency.
- This loan is for investments made on the equipment, the installation as well as the operations that are linked to the first two. Support stands between €10,000 and 50,000 for a duration of 5 years. The interest rate of the loan is fixed at 1.03% per year, and is preferential since it is subsidised by the State.
- It is compatible with IECEE (formerly CEE) certification.

References

- Prêt Éco-Énergie (PEE). (2017). Retrieved October 20, 2017, from <http://www.bpifrance.fr/Toutes-nos-solutions/Prets/Prets-thematiques/Pret-Eco-Energie-PEE>

The Private Finance for Energy Efficiency Instrument

The PF4EE Scheme



 **EIB Loan**
(~50-75mio EUR per FI)



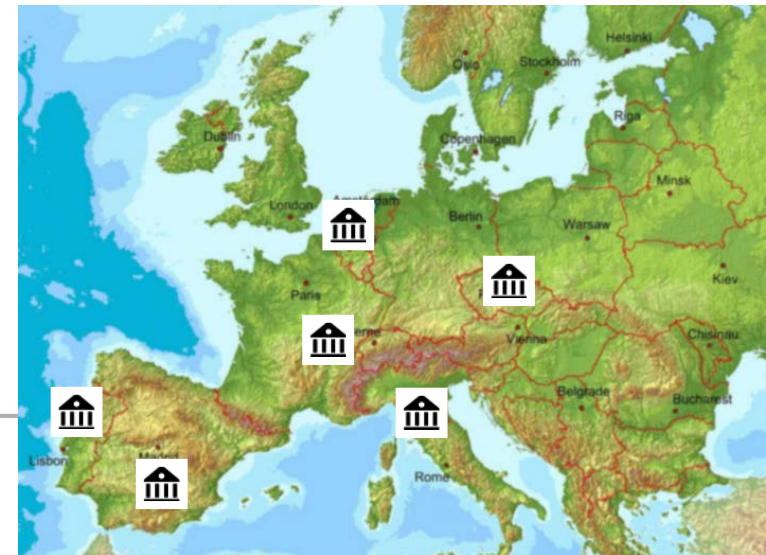
 **Risk Sharing**
(up to 80% coverage of expected losses on a loan basis)

 **Komerční Banka,
Czech Republic**

Energy efficiency in building refurbishment and industrial process

 **Santander,
Spain**

Energy efficiency and small renewable energy investments mainly in hotels





- **Energy Audit Report** or other eligible **documentation**
- **Recipients/Borrowers** are small or medium-sized enterprises (SME), midcap or large enterprises



- **Loan** between
 - EUR 40,000 and EUR 5,000,000
- **Maturity:** 3-20 years



- **Investment costs** \leq EUR 10,000,000
 - **EE in Building Refurbishment, Industrial Processes, CHP, District Heating, Public Lighting**
-

The Private Finance for Energy Efficiency Instrument

How to Develop a EE Loan Portfolio



Start up

Ramp up

Full speed

Processes	Know-how	Pipeline	Appraisal	Monitoring & Reporting
Project appraisal? Branch and headoffice role?	Technologies? EE Market?	Attract EE clients? Identify/create EE clients?	Project eligibility? Appraisal of energy savings?	Reporting requirements? Verification of savings?
(Technical) questionnaires, checklists Evaluation & reporting tools	Showcases, EE manuals Energy-Audit trainings ESCOs, Auditors, Associations,	List of EE events & agent, energy auditors Showcases, Impact of EE Investment on cash-flow Portfolio screening	Technical assistance Simplified energy savings estimation	Assistance on (technical) reporting Define viable verification processes

Self-assessment, eligibility/reporting tools, PF4EE Web-tool

The Private Finance for Energy Efficiency Instrument

How to Develop a EE Loan Portfolio



1. Check eligibility or only estimate savings

To start the Web-Check, please choose your approach

energy efficiency project for a Life4Energy loan

Select this route if

- ✓ you have a specific energy efficiency project in mind
- ✓ you know the investment costs of this project
- ✓ you have information about the technical details of this project
- ✓ you want to obtain a certificate to apply for Life4Energy at Banca BPER

Start assessment
(takes 10-20 minutes)

or a typical energy efficiency project

Select this route if

- ✓ you are interested in energy efficiency without a concrete project idea
- ✓ you want to learn about the energy and cost savings potential of typical energy efficiency measures

Start assessment
(takes 5-10 minutes)

Please be aware that all energy and cost savings results are only estimates. To obtain more precise estimates, you should get in touch with an Energy Auditor.

Please be aware that the results from the Web-Check will be preliminary and are pending on a full eligibility check through BPER.

2. Select EE measures

Does your investment concern the following measures?
If yes, please select and click on „Next“ to go on

Building refurbishment - building envelope

Thermal insulation of walls Thermal insulation of roofs Thermal insulation of windows

Building refurbishment - technical equipment

Photovoltaic Solar thermal heat generation

Illumination Air conditioning

Heat pump replacing boiler Thermostatic valves

Equipment in production facilities

Compressed air Economizer on existing boilers Variable speed drive

Electric motor replacement Heat recovery Ventilation

District wide rehabilitation or upgrade

District heating

Cogeneration

Cogeneration

NEXT **MY INVESTMENT CONCERNS OTHER MEASURES**

3. Provide details

Thermal insulation of walls

Total cost of energy efficiency measure(s): 200000 EUR

Year: 1970 - 1979

What is the type of the building? Non residential building

What is current heating energy source? Natural Gas

What was your heating energy demand last year? kWh/year

Does the annual energy demand for heating include hot water generation? NO

Is the building actively cooled (through air-conditioners)? YES

What is the thickness of the insulation? cm

DONE Information incomplete Delete this measure

Summary of the energy efficiency project
(includes only measures that satisfy technical criteria)

Measures

Thermal insulation of walls: 200000 EUR

Illumination: 100000 EUR

Economic Summary

Total investment costs (excluding VAT): 300000 EUR

Energy cost savings: 46586.31 EUR

Energy and emissions benefits

Energy savings: 360203.05 kWh

Energy generated: 0 kWh/y

CO2 Savings: 119.23 tCO2e

Estimates for energy savings/energy generated are based on: Life4Energy web-check

Eligible

Disclaimer: This web-tool provides only an indication of the possible eligibility of the planned energy efficiency project. The final project is subject to a full eligibility verification through BPER.

NEXT

3. Obtain results/estimations:

- Project eligibility
- Energy (cost) savings
- CO2 Savings

The Private Finance for Energy Efficiency Instrument

How to Develop a EE Loan Portfolio



Life4Energy Web-Check

Secondary information

Energy tariffs used in t

Electricity	0.13 kWh/ye
Natural Gas	0.3 Nm ³ /ye
LPG	1.2 l/year
Diesel	1.4 l/year

Information for BPER E

2.1	2.2	2.3
		Thermal insulation of roof walls: 1
2.13	2.14	2.15
		illumination of

Life4Energy Web-Check

Overview of measu

Thermal insul

Total investment cost
Energy cost savings

Total cost of energy efficiency measu residential building !!! What is current annual energy demand for heating? thickness of the insulation: 7: 20 cm

Illumination

Total investment cost
Energy cost savings

Total cost of energy efficiency measu rating of the old illuminants: 70 W/l each lamp? 20000 h/year !!! Do you Yes

Life4Energy Web-Check

Company information

Name of the company:
company xyz

Address of company's head off:
**random street 123
27534 Rome
Italy**

Type of company
small

Activity of company
Description

Plans for financing th

Subsidies of European origin:
Amount of EU subsidies:

Detailed financing plan

Total investment cost:
Other investment costs:

Self-financing amount:
Third party investment:
Other financing:
Subsidies of European origin:
Subsidies of national or region:
Other subsidies:
Credit amount:

Total costs:
Total funds:

Life4Energy Web-Check

BPER: Banca

European Investment Bank

European Commission

EUROPEAN UNION

Date of Life4Energy Web-Check assessment:
14.12.2017 21:4 hs.

Name of the company:
company xyz

Contact Person:
**Max Muster
00492389465
max@muster.de**

Contact person at BPER:
Mr. Gio

To apply for a Life4Energy loan, please follow these steps:

- 1 Check whether your information in this pdf summary is correct.
- 2 Make a copy of your Energy Performance Certificate (EPC) and send it on a Life4Energy loan application.
- 3 Send both documents on a Life4Energy loan application.

5. Download a pdf summary for loan application

Summary of the energy efficiency project
(includes only measures that satisfy technical criteria)

Economic Summary

Total investment costs (excluding VAT)	300000 EUR
Energy cost savings	46586.31 EUR

Energy and emissions benefits

Energy savings	360203.05 kWh/y
Energy generated	0 kWh/y
CO2 Savings	119.23 tCO₂eq/y

Estimates for energy savings/energy generated are based on: **Energy audit**

Note that self-assessed energy savings data needs to be validated by BPER's technical experts before a final loan decision is made.

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- FI commitment to understanding the basic **differences of the cleantech market relative to other markets** is key for client identification/ pipeline development (Energy Audits, ESCO market, typical EE measures...)
- Even though all partner banks laid out the potential target market in their application, the actual 'sweet spot' (where many loans can be made) in each market only **develops with experience and some trial and error**
- Cleantech credit lines go along with the need for technical capacity/expertise that is not generic to most Fis, support through **easy and efficient tools & local technical expertise is important**

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