



## D.T2.5.1

# Report of the pilot activities to assess Industrial sectors RE projects in the Veneto region

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WP T2: Activity 2.5 PA 2: Improving energy efficiency in Industry Sector

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## Introduction

The FIRECE project aims to contribute to the achievements of targeted results of Regional Energy Plans through an increased use of (innovative) financial instruments in the Central Europe area. The particular focus is on public support to industry to invest into energy efficiency and renewable energy sources.

The activity 2.5 *Improving energy efficiency in Industry Sector* includes Pilot Actions carried out in five partner countries to assess Industrial sector RE projects using the Project level tool developed in WP T1 (O.T1.4) and updated in WP T2 (O.T2.2). The goal is to assess the public investments to support Industry low carbon transition: analysis of projects/investment plans elaborated by SMEs on EE/RES to verify their quality and quantity contribute to achieve the Energy Plans' targets.

The Project level tool main focus is to evaluate economic parameters of a particular project (e.g. NPV - net present values, CF - cash flow, etc.) as well as its environmental benefits in terms of decreased carbon emissions.

This report summarizes the activities that were carried out in *the Veneto Region (Italy)*

The analysis has been conducted using the tool provided by the partner of the project ENVIROS by implementing the necessary parameters for the calculations.

An analysis was conducted on the main Italian emission factors in order to implement the calculation tool. This data has been the subject of research and analysis on technical literature and on official portals provided for example by INEMAR and SINANET.

Unfortunately, due to privacy data protection, it was not possible to retrieve some data of the companies to be analyzed such as their sectors of belonging. This situation did not allow, in a similar way, to calculate the rate of return (opportunity cost) <sup>1</sup> of the companies involved for all analyses; an average of 5% has been then applied.

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<sup>1</sup> The **opportunity cost** In Economy it's the Cost resulting from the non-exploitation of an Opportunity granted to the economic entity. Quantitatively, opportunity cost is the value of the best left-out alternative. In other words, the opportunity cost is the sacrifice that an economic operator must make in order to make an economic choice.



All the companies included have carried out an efficiency intervention with the construction of a photovoltaic system. It was not possible to know for each intervention the peak power achieved.

It was not possible to know the type of plant built (presence of storage batteries, construction of support structures, etc.) preventing in fact a comparative analysis of the plants. This also prevents a summary check of the data provided.

It is specified that all interventions at present are not monitored and the actual development of savings isn't known.



## EXECUTIVE SUMMARY

Country / region / PA2 Implementation area

State ITALIA

VENETO Region

### Relevant energy saving funds:

POR 2007-2013 (FESR), Axis 2, intervention line 2.1 "renewable energy production and energy efficiency", Action 2.1.3. - Rotation fund and capital contributions for investments made by SMEs aimed at reducing energy consumption

### Target group - SMEs involved: *micro / small / medium-sized*

*SMEs are the main target group of the Pilot Action 2. Under Regulation (EU) No 651/2014 of the European Commission, micro, small and medium-sized enterprises (SMEs) are enterprises with fewer than 250 persons and whose annual turnover does not exceed EUR 50 million and / or \ their annual balance sheet total does not exceed EUR 43 million.*

### Number of SME's involved: 8

**Type of projects:** new/ finalized / ongoing projects (*please select the appropriate*)

Finalized projects

- Implemented: 8

The analysis has been conducted with the data available and consistent with the performance of the Fund both from the financial and energy savings point of view. Performance of the plants built and the real remuneration of investments could be an additional aspect to be investigated, but confidentiality of data makes this analysis very difficult.

### Energy saving measures / type of investments analysed

#### Renewable energy projects: 8

Measures in question:










- Rooftop photovoltaic power plant: 8

Note: Interventions on photovoltaic systems are almost all of the interventions financed and carried out. More data of other investments were not available.



Analysing what is financed, it is clear that more than 33% of the total has been used for the construction of photovoltaic systems.

### Involved stakeholders (financial actors)

COMPAGINE SOCIALE		%
 <b>REGIONE DEL VENETO</b>	REGIONE DEL VENETO	51,000
	UNICREDIT S.P.A.	15,300
 <b>SINLOC</b> <small>SISTEMI INIZIATIVE LOCALI S.P.A.</small>	SINLOC SISTEMI INIZIATIVE LOCALI S.P.A.	8,267
<b>INTESA</b>  <b>SANPAOLO</b>	INTESA SAN PAOLO S.P.A.	8,000
 <b>BNL</b> <small>GRUPPO BNP PARIBAS</small>	BANCA NAZIONALE DEL LAVORO S.P.A.	6,500
	HOLDING DI PARTECIPAZIONI FINANZIARIE BANCO POPOLARE S.P.A.	2,718
	BANCO POPOLARE SOCIETA' COOPERATIVA	2,550
 <b>MONTE DEI PASCHI DI SIENA</b> <small>BANCA DAL 1472</small>	BANCA MONTE DEI PASCHI DI SIENA S.P.A.	4,223
 <b>Banca Popolare di Vicenza</b>	BANCA POPOLARE DI VICENZA S.P.A.	1,201
 <b>Banca Popolare Volksbank</b>	VOLKSBANK BANCA POPOLARE	0,131
 <b>VENETO BANCA</b>	VENETO BANCA S.P.A.	0,110
	<b>TOTALE</b>	<b>100,000</b>



## 1. SELECTION OF THE FINANCIAL INSTRUMENT ADDRESSED TO ENERGY SAVINGS FOR INDUSTRY

Summary data on funding management can be summarized below.

### FINANCIAL RESOURCES AVAILABLE

Financing	20,672,268.91
Grant	12,127,731.09
Tot	32,800,000.00

REQUESTS SUBMITTED	No.		
POSITIVE	215	Referred to	
		200	ADMITTED
		1	CLOSED IN ADVANCE
		4	WITHDREW before contracting
		7	Withdrawn
		3	REVOKED before contracting
NEGATIVE	68		
WITHDREW by the Proposers	9		
INELIGIBLE	34		
<b>Total</b>	<b>326</b>		

<b>INVESTMENTS ALLOWED (on positive practices)</b>	60,070,710.96
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### COMMITTED AMOUNTS (on positive practices)

Bank Share	23,403,539.86
Fund Share	23,403,539.86
Contribution Share	12,101,615.67
D-E	35,505,155.53
C-D-E	58,908,695.39

### PAYMENTS

Total Funding	42,863,277.28
Total Fund Share	21,431,638.64



Total Contribution	11,172,386.05
G-H	32,604,024.69
F-H	54,035,663.33

**Savings**

**ON EROGATE PRACTICES (declared)**

Total tCO <sub>2</sub>	23.130,95
Total GJ	424.715,34
kW Energy Saved	119.390.573,92
kW Installed Power	104.312,97

There is access to the Fund by companies operating in the sectors:

- more than 70% of cases;
- trade for about 11%;
- accommodation and catering services for 8%.

The remaining sectors have not had an impact. The primary sector was excluded from the Bando.

All the data (aggregated data), were provided by VENETO SVILUPPO regional financial agencies in charge of the establishment and management of the revolving fund and contributed to investments made by SMEs aimed at reducing energy consumption.

All participating companies decided not to use their own funds in the development of the projects, opting for funding equal to 77% of the entire amount of the project and a grant of 23%.

The analysis tool provided the possibility of simulating investment scenarios in which there was participation in the company's equity projects.





## 2. SELECTION OF SME'S INVESTMENT PROJECTS FOR THE ASSESSMENT

### 2.1 Criteria followed to identify projects

The projects analyzed were those with available and accessible data

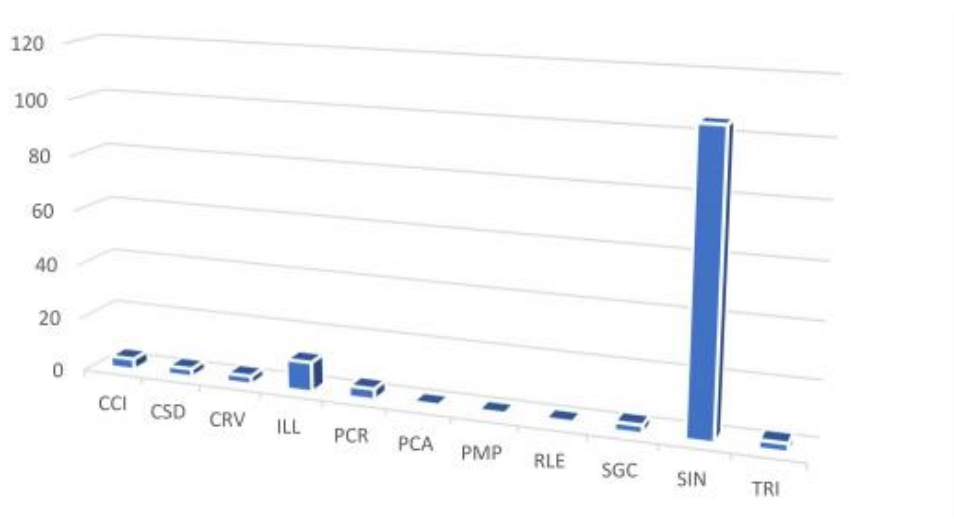
### 2.2 Description of SME's investment projects analysed

The analysis includes only the projects already implemented. Project energy performance testing is NOT available.

Half of the projects represent the installation of renewable energy sources, in particular photovoltaic systems.

In general, all funding covered the types of interventions that can be summarized in the following table:

DATASHEET - TYPE OF INVESTMENT  
 by number of projects



N.	DESCRIPTION
4	CCI - COGENERATION WITH INTERNAL COMBUSTION ENGINES
3	CSD - SOLAR COLLECTORS FOR PURPOSES OTHER THAN HEATING ENVIRONMENTS
3	CRV - COMBUSTION OF PLANT RESIDUES
11	ILL - HIGH-PERFORMANCE LIGHTING SYSTEMS WITH LED LAMPS
4	PCR - HIGH-EFFICIENCY ELECTRIC HEAT PUMP FOR RE-HEATINGDAMENTO NON-RESIDENTIAL ENVIRONMENTS



- 1 PCA - HIGH-EFFICIENCY ELECTRIC HEAT PUMP FOR HEALTH WATER HEATING
- 1 PMP - HEAT PUMP DRAGGED BY FIRST ENGINE
- 1 RLE - RE-REFINING POWER LINES TRIPHASI
- 3 SGC - HEAT GENERATOR REPLACEMENT
- 105 SIN - SCHEDA FOR INTERVENTS NOT CODIFICATS (mainly photovoltaic systems and replacements of production plants)
- 3 TRI - TRIGENERATION WITH INTERNAL COMBUSTION ENGINES

The data available for analysis relate only to interventions to build photovoltaic systems.

The main features of the projects are summarized in the table below.

Id	SME	investment type	total investment	loan	Own resources	Grant	expected savings in kWh	energy carrier saved
1	Name 1	Photovoltaic	83,110.00	63,994.70	0.00	19,115.30	79130	Electricity
2	Name 2	Photovoltaic	196,250.00	151,112.50	0.00	45,137.50	348230	Electricity
3	Name 3	Photovoltaic	40,100.00	30,877.00	0.00	9,223.00	39130	Electricity
4	Name 4	Photovoltaic	84,275.10	64,891.82	0.00	19,383.28	118050	Electricity
5	Name 5	Photovoltaic	290,138.00	223,406.26	0.00	66,731.74	104875	Electricity
6	Name 6	Photovoltaic	202,750.00	156,117.50	0.00	46,632.50	152770	Electricity
7	Name 7	Photovoltaic	152,750.00	117,617.50	0.00	35,132.50	203560	Electricity
8	Name 8	Photovoltaic	155,844.15	120,000.00	0.00	35,844.15	144510	Electricity

The implementation of the projects was motivated by achieving energy savings and/or decreasing dependence on external energy sources.



### 3. CONTRIBUTION OF SME'S PROJECTS TO ACHIEVE REGIONAL ENERGY TARGETS

The European Union has set a target of progressively reducing its greenhouse gas emissions until 2050. The main climate and energy targets are set in the "2020 Climate and Energy Package" and the consequent "2030 Framework for Climate and Energy". These targets are set to put the EU on the road to transformation towards a low-carbon economy, as described in the 'Long-Term Strategy 2050'.<sup>2</sup>

The objectives are set in three areas, including:

- Improving energy efficiency,
- Generating energy from renewable energy sources,
- Reducing greenhouse gas emissions,

1990 used as a reference (there is Table 2 for specific objectives).

Table 2 - EU Energy and Climate Policy Goals

Year	Energy efficiency target	RES goal	Target to reduce greenhouse gas emissions (non-ETS sectors)
2020	20 %	20 %	20% (10%)
2030	32.5 %	32 %	40% (30%)
2050	significant future investments		80 %

As a result of the EU-wide targets, individual targets have also been set for each Member State. Table 3 shows the relevant objectives for Italy.

Table 3 - Italy - Goals and Performance

Year	Energy efficiency target	RES goal	Target for reducing greenhouse gas emissions (non-ETS sectors)
2020	24	17	(13%)

<sup>2</sup> [https://ec.europa.eu/clima/policies/strategies\\_en](https://ec.europa.eu/clima/policies/strategies_en)



2030	43	30	33%
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Financial mechanisms are considered one of the main tools to promote and support the implementation of energy saving projects and the installation of new types of renewable energy.

With the implementation of specific energy-saving projects, SMEs and other companies contribute directly to national (and therefore European) energy and climate targets.

The implementation of the projects was motivated by achieving energy savings and/or decreasing dependence on external energy sources.



## 4. ACTIVITIES CARRIED OUT TO ASSESS INDUSTRIAL SECTORS RENEWABLE ENERGY PROJECTS

- Meeting with Local actors and Financial Instruments

The pilot action took place during COVID-19 and therefore meetings with Local Actors have been replaced by several contacts and online meetings. Actors involved:

Regional department for Energy

Regional financial agency

- IT tool adaptation in order to analyse SME's projects performance in view to contribute to the Energy targets

The tool (particularly the backstage) was initially developed in the Czech language creating an initial difficulty for its understanding and use.

Within the excel file there is the option to select the language but only a few of them were working.

The emission factors necessary for the operation of the software required research both in the industry literature and on sites that are not always simple. Not all data required were available or consistent with the project area only

After an initial first difficulty, with the assistance of ENVIROS, the tool worked making it easy to read the results.

It would have been useful to make the cast model available to possibly adapt it to different realities.



## 5. ASSESSMENT PROCEDURE OF SME'S PROJECTS

### 5.1 Input and output data of the investment assessment

*As preparatory activity a user-friendly IT instrument was developed as the final result of an analysis of public investments addressed to Industry low-carbon transition projects and the identification of quality and quantity criteria to be applied for the assessment analysis. The tool focuses on the evaluation of the project's economic parameters and environmental benefits.*

#### **Investment/funding related inputs:**

- The Total investment
- Type of financing (Loan, Subsidy, Own resources)
- The Interest rate
- The Repay of the loan
- The Discount rate
- The Lifetime of the project/measure

#### **Energy saving related inputs:**

- Electricity
- Natural Gas
- Coal
- Heat
- Solid biofuels
- Gaseous biofuels
- Other fuels

#### **Figure outputs**

The following figure outputs are obtained from the evaluation of SME's investment project:

- The expected drop of CO<sub>2</sub>eq emissions
- The expected Cash Flow
- The NPV - Net Present Value
- The simple payback



The equivalent scenario is also calculated that relates to the situation when the project does not use any financial instrument (loan) and the co-financing is secured only by own resources. The NPV of both scenarios is the same, while the cash flow becomes positive sooner in case of the equivalent scenario - as shown in the figures. The investment with this direct investment is completed by the missing subsidy share.

The input and output data of the 8 SME's investment assessment are presented in the attached tables:



## 5.2 TABLES / IT TOOL CALCULATION RESULTS

### Project No.1

Project No. / Name	1		
<b>General investment data</b>			
Organization size ( ) )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production	Services	
	Nd	Nd	
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	83.100	
	Loan	63.994,70	77%-
	Own resource	0	0%
	Grant	19.115,30	23%
Loan	Interest rate (in %)		5.45
	Refund (in years)		7
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			





Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros
Electricity	79.13	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	42,018,030 kg		
CH4 emissions expected to fall	418,756 g		
N2O emissions expected to fall	344,690 g		
Expected fall in CO2eq emissions	42,131,217 kg		
Expected cash flow	15,826 euros/year		
Net current value	158.008,51		
Simple return (in years))	5		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	65.042,26		
Grant share (in %)	22%		



## Project2

Project No. / Name	2		
<b>General investment data</b>			
Organization size ( )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production	Services	
	Nd	Nd	
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	196.250,00	
	Loan	151.. 112.5	77%-
	Own resource	0	0%
	Grant	45. 137.5	23%
Loan	Interest rate (in %)		5.08
	Refund (in years)		7
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros



Electricity	348,23	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	184,910,130 kg		
CH4 emissions expected to fall	1,842,833 g		
N2O emissions expected to fall	1,516,890 g		
Expected fall in CO2eq emissions	185,408,234 kg		
Expected cash flow	69,646euros/year		
Net current value	716.386,72		
Simple return (in years))	3		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	151 556,39		
Grant share (in %)	23%		



### Project3

Project No. / Name	3		
<b>General investment data</b>			
Organization size ( )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production	Services	
	Nd	Nd	
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	40.100	
	Loan	30.877	77%-
	Own resource	0	0%
	Grant	9.223	23%
Loan	Interest rate (in %)		4.05
	Refund (in years)		4
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros



Electricity	39,13	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	20,778,030 kg		
CH4 emissions expected to fall	207,076 g		
N2O emissions expected to fall	170,450g		
Expected fall in CO2eq emissions	20,834,001 kg		
Expected cash flow	7,826euros/year		
Net current value	80.099,30		
Simple return (in years))	5		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	30.199,91		
Grant share (in %)	25%		



## Project4

Project No. / Name	4		
<b>General investment data</b>			
Organization size ( ) )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production	Services	
	Nd	Nd	
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	84.275,10	
	Loan	64.891,82	77%-
	Own resource	0	0%
	Grant	19.383,28	23%
Loan	Interest rate (in %)		4.70
	Refund (in years)		5
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros



Electricity	118,05	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	62,684,550 kg		
CH4 emissions expected to fall	624,721 g		
N2O emissions expected to fall	514,226 g		
Expected fall in CO2eq emissions	62,853,407 kg		
Expected cash flow	23,610 euros/year		
Net current value	268.410,64		
Simple return (in years))	4		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	64.347,39		
Grant share (in %)	24%		



## Project5

Project No. / Name	5		
<b>General investment data</b>			
Organization size ( ) )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production	Services	
	Nd	Nd	
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	290.138	
	Loan	223.406,26	77%-
	Own resource	0	0%
	Grant	66.731,74	23%
Loan	Interest rate (in %)		4.9
	Refund (in years)		7
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros





Electricity	104,88	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	55,688,625 kg		
CH4 emissions expected to fall	554,999 g		
N2O emissions expected to fall	456,836 g		
Expected fall in CO2eq emissions	55,838,637 kg		
Expected cash flow	20,975 euros/year		
Net current value	73.023,18		
Simple return (in years))	14		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	222.597,31		
Grant share (in %)	23%%		



## Project6

Project No. / Name	6		
<b>General investment data</b>			
Organization size ( ) )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production	Services	
	Nd	Nd	
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	202.750,00	
	Loan	153.117,50	77%-
	Own resource	0	0%
	Grant	46.632,50	23%
Loan	Interest rate (in %)		3.25
	Refund (in years)		6.5
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros



Electricity	152.770	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	81,120,870 kg		
CH4 emissions expected to fall	808,459g		
N2O emissions expected to fall	665,466 g		
Expected fall in CO2eq emissions	81,339,390 kg		
Expected cash flow	30,554euros/year		
Net current value	277.979,35		
Simple return (in years))	7		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	152.647,03		
Grant share (in %)	25%		



## Project7

Project No. / Name	7		
<b>General investment data</b>			
Organization size ( ) )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production		Services
	Nd		Nd
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	152.750	
	Loan	117.617,50	77%-
	Own resource	0	0%
	Grant	35.132,50	23%
Loan	Interest rate (in %)		5,1
	Refund (in years)		5
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros



Electricity	203.560	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	108,090,360 kg		
CH4 emissions expected to fall	1,077,240 g		
N2O emissions expected to fall	886,707 g		
Expected fall in CO2eq emissions	108,381,530 kg		
Expected cash flow	40,712 euros/year		
Net current value	455.849,85		
Simple return (in years))	4		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	117.942,82		
Grant share (in %)	23%		



## Project8

Project No. / Name	<b>8</b>		
<b>General investment data</b>			
Organization size ( ) )	Micro	Small	Average
	Nd	Nd	Nd
Type of business <i>(Please tick)</i>	Production		Services
	Nd		Nd
Type of economic activity to which the investment refers	N.d.		
Type/ subject of investment	<i>Please tick or indicate the % share of your energy savings</i>		
Installation of photovoltaic systems (for the production of electricity)			
Installation of solar thermal systems (for heat generation)			
<b>Investment/financing input</b>			
Investment		In Euro	As % of total
	Total	155.844,15	
	Loan	120.000	77%-
	Own resource	0	0%
	Grant	35.844,15	23%
Loan	Interest rate (in %)		5,052
	Refund (in years)		5
Own resource	Discount rate (in %) (if no data uses the typical country value)		5 %
Measure	Duration of measurement		25
<b>Input related to power savings</b>			
Type of energy	The value of energy saved	Energy unit	Average cost of energy unit in euros



Electricity	144.510	MW/h	200th/MW/h
Natural gas			
<b>Output data</b>			
Expected decline in CO2 emissions	76,734,810 kg		
CH4 emissions expected to fall	764,747 g		
N2O emissions expected to fall	629,486 g		
Expected fall in CO2eq emissions	76,941,515 kg		
Expected cash flow	28,902 euros/year		
Net current value	287.170,65		
Simple return (in years))	5		
<b>Equivalent scenario without loan investment</b>			
Investments in own resources in Euro	120.172,54		
Grant share (in %)	23%		



## Annex: Tool - Description of inputs and outputs

### Investment/funding related inputs:

- The Total refers to the total investment in the project, including each funding share (Loan, Subsidy, Own resources).
- The Loan is the share of the loan funding on the total investment
- The Subsidy is the share of the subsidy funding on the total investment
- The Own resources is the share of own funding by the project beneficiary on the total investment
- The Interest rate is the rate linked to the loan share
- The Repay is the period length to repay the loan
- The Discount rate refers to the rate used for the discount factor on cash flow, in order to estimate the NPV
- The Lifetime is the expected lifetime of the project

### Energy saving related inputs:

- Electricity
- Natural Gas
- Coal
- Heat
- Solid biofuels
- Gaseous biofuels
- Other fuels

### Figure outputs

The following figure outputs are obtained from the evaluation of SME's investment project:

- The expected drop of CO<sub>2</sub>eq emissions is the sum of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions
- The expected Cash Flow is calculated based on the energy savings and the energy cost inputs
- The NPV is the Net Present Value calculated for the project funding mechanism
- The simple payback is the total investment divided by the Cash Flow
- The equivalent scenario: Subsidy share is a theoretical share of subsidy that would be needed in case of implementation of the equivalent scenario (without loan) to keep the same NPV of the project.





- The equivalent scenario: Own resources is the share of own funding by the project beneficiary in case of the equivalent scenario.