

## **TRACTEBEL ENGINEERING & ENERGY EFFICIENCY FINANCE FACILITY**

Seminar "Accession of EU non-reimbursable funds – Improving the chance for success"

Chamber of Commerce Switzerland – Romania, 4<sup>th</sup> November 2010

**CHOOSE EXPERTS, FIND PARTNERS**

# CONTENT

- Part 1 – Tractebel Engineering presentation
- Part 2 – EU/EBRD Energy Efficiency Finance Facility

# GDF SUEZ: A WORLD LEADER IN ENERGY

## > A STREAMLINED ORGANISATION

GDF SUEZ

Energy France

Energy Europe & International

Global Gas & LNG

Infrastructures

Energy Services

Environment

TRACTEBEL Engineering  
GDF SUEZ

# GDF SUEZ

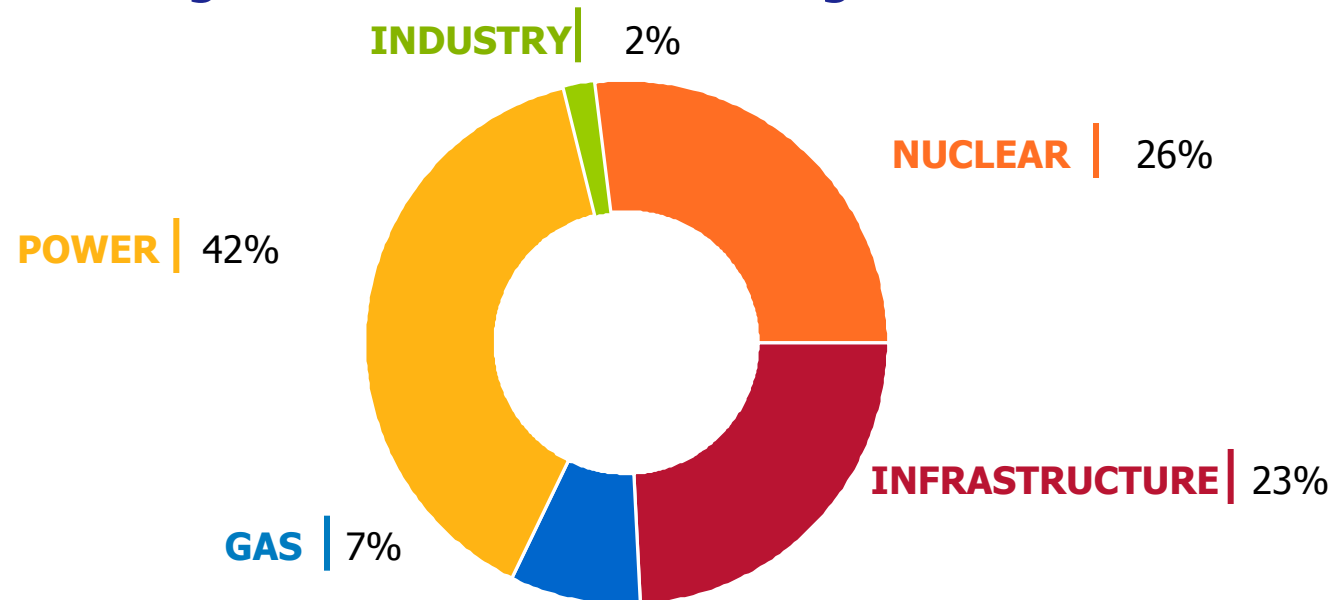
## > KEY FACTS 2009

- €79.9 billion revenues
- 200,000 employees worldwide
- Leader in electricity (approx. 70 GW in 2009)
  - No. 1 power producer in Belgium
  - No. 2 power producer in France
  - No. 1 independent power producer (IPP) in the world
- Leader in natural gas and LNG
  - No. 1 transport and distribution network in Europe
  - No. 1 gas purchaser and trader in Europe
  - No. 1 LNG supplier in the Atlantic basin
- European leader in energy services
- World co-leader in Environment, unique pure player

# TRACTEBEL ENGINEERING

## > KEY FACTS 2009

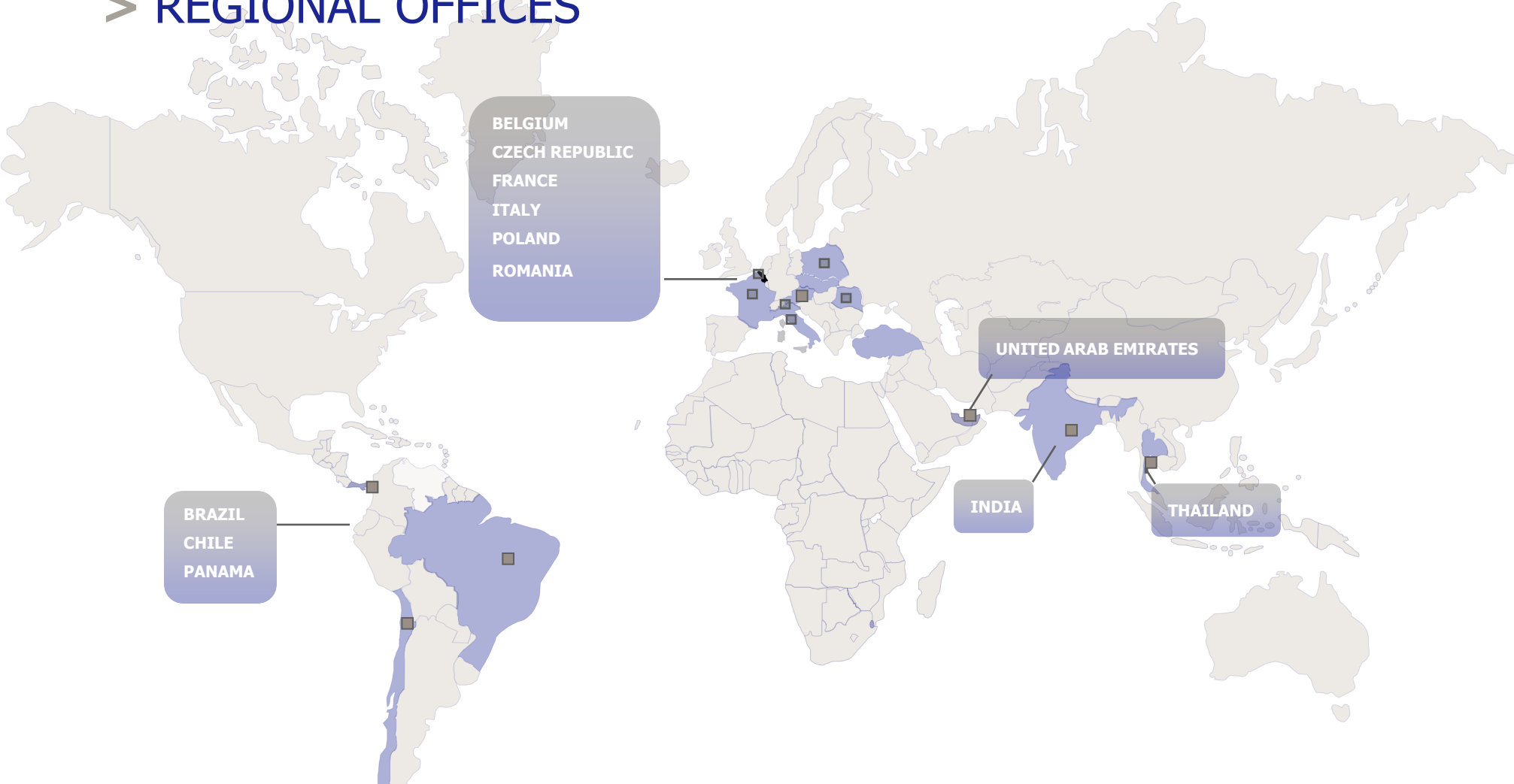
- Turnover of 460 M€  
of which 50% is generated outside of Belgium



>3900 highly skilled people, represented in about 20 countries

# WORLDWIDE PRESENCE

## > REGIONAL OFFICES



# TRACTEBEL ENGINEERING

## > MISSION

To assist our customers  
throughout the life cycle of their installations  
with **innovating engineering solutions** aiming at  
**minimizing the investment risks** and  
**managing the total cost of ownership**

# TRACTEBEL ENGINEERING

## > ACTIVITY SECTORS

### POWER

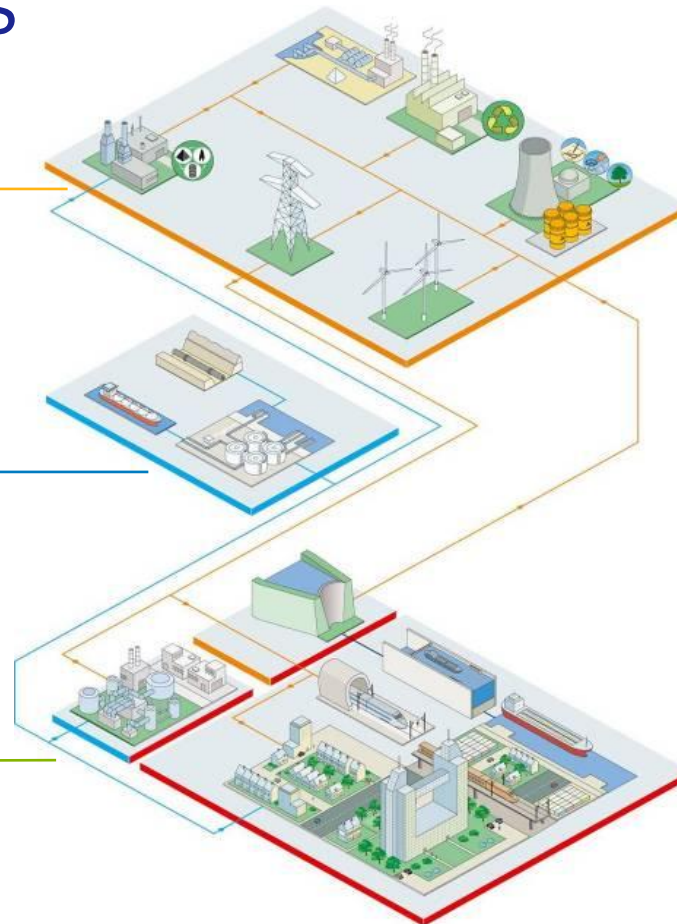
Thermal power generation  
Energy efficiency & environment  
Hydroelectric power  
Transmission & distribution

### GAS

Liquefied Natural Gas  
Transmission, storage & distribution

### INDUSTRY

Process industry  
Clean production industry



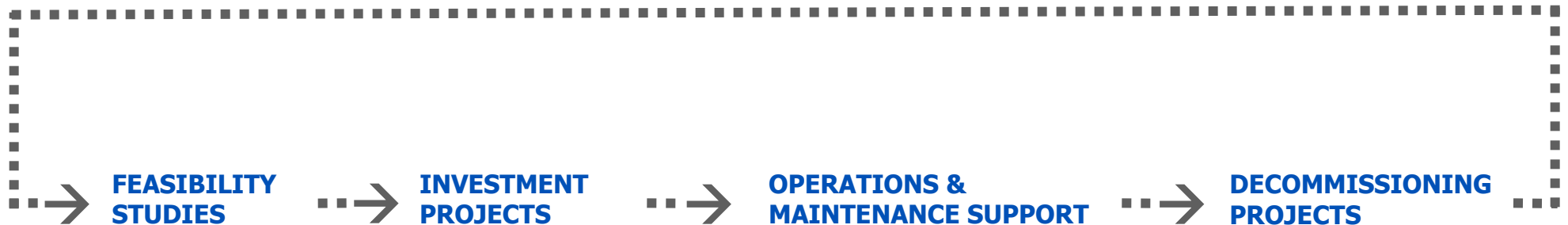
### NUCLEAR

New plants  
Operational support  
Radwaste management  
Decommissioning

### INFRASTRUCTURE

Urban development  
Transport networks  
Water resources

# LIFE-CYCLE CONSULTANCY AND ENGINEERING SERVICES



Policy studies

Investment studies

Basic design

Audits

Design

Procurement

Implementation

Management &  
follow-up of construction

Long Term Operation

Performance optimisation

Reliability studies

Operational assistance

Simulation & training

Asbestos removal

Soil remediation

Site redevelopment study

Dismantling

# TRACTEBEL ENGINEERING

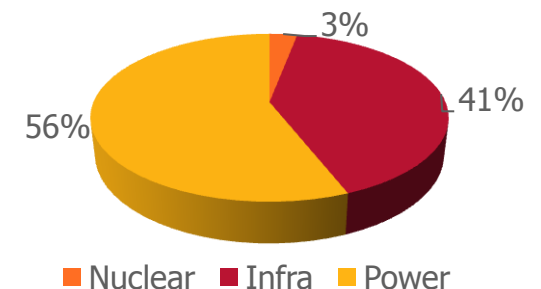
## > ... has engineered

over 30 Combined Cycle Power Plants	> 20,000 MWe
over 50 Hydro Power Plants	> 15,000 MWe
over 20 Coal Fired Power Plants	> 6,000 MWe
7 Nuclear Power Plants	> 5,000 MWe
30 Water Desalination Plants	> 1000 MIGD or > 4.5 Mm <sup>3</sup> /d
30 Cogeneration Plants	> 1,000 MWe
30 Wind Farms	> 800 MWe
15 Biomass Plants	> 1,000 MWe
over 500 Projects for HV Substations, HV Lines and HV Cables	
over 25 LNG Terminals	
60,000 km of Gas Pipelines	
10 Underground Gas Storage Installations	
30 Gas Compression Stations	

# TRACTEBEL ENGINEERING IN ROMANIA

## > KEY FACTS

- Active in engineering for power and infrastructure since 1997
- Formerly known in Romania as TRAPEEC S.A. (until Sept.2009)
- Turnover: 7.8 M€ (end 2009)
- EBITDA: 1.2 M € (end 2009)
- Employees > 235 (end 2009)
- Relevant certifications in Romanian market:
  - Integrated management system QHSE (9001:2000, 14001:2004, 18001:2007)
  - ANRE for design of electrical installations
  - CNCAN certification for design in nuclear field
  - ISCIR for design of pressure vessels
  - .....others



# PRODUCTS

## T&D

- Electrical substations
- Electrical lines
- Power System Consulting

## PG&E

- Power Plants (Thermal, Nuclear)
- District heating networks
- Renewable
- Energy Efficiency
- Consultancy for energy sector

## Infra

- Roads and bridges
- Hydro
- Traffic management
- (Water & wastewater networks)

# TRACTEBEL ENGINEERING IN ROMANIA

## > CLIENTS AND PARTNERS

### CLIENTS

- Sector actors
  - Transelectrica, Electrica, Hidroelectrica,
  - Termoelectrica, Electrocentrale,
  - Nuclearelectrica, other generators,
  - Roads administration, Waterways administration....
- Municipalities & local authorities
- International donors
  - EBRD, BEI, Phare, RAEF
- Others
  - Investors, project developers
  - Industrial consumers
- GDF SUEZ Business Units

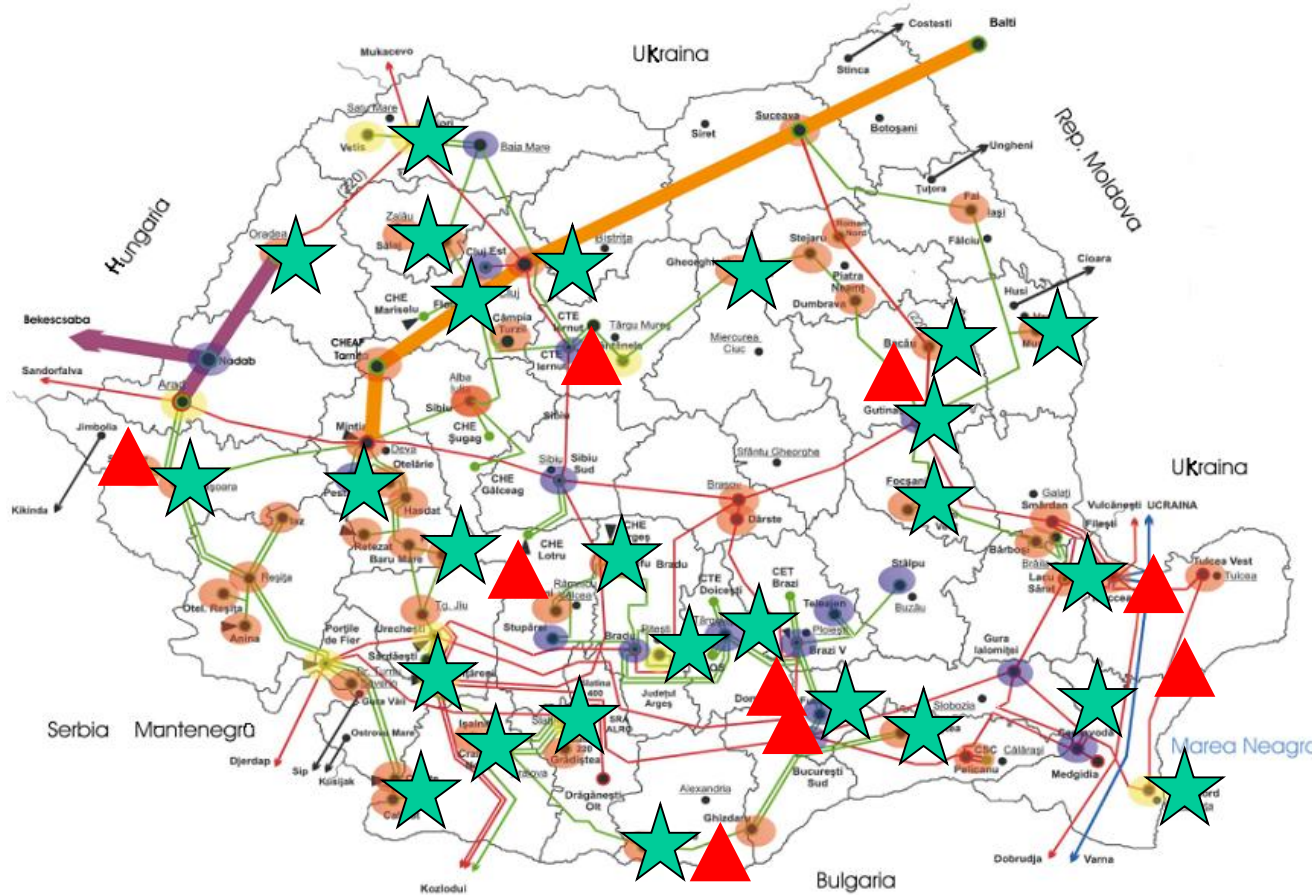
### PARTNERS

- Romanian companies
  - Contractors:
    - Energomontaj, Electromontaj...
    - Romstrade...
- International companies
  - EPC players: ABB, GE, Siemens, Vatech, Jacobsen Elektro....
  - Contractors: Strabag, Astaldi, Tirrena Scavi, Colas.....
  - Consultancy companies:
    - COWI, Ecorys, Enviros, Salans, Iberdrola....
    - Iberinsa, Louis Berger, WSP, Inocsa, Safege.....

# OUR STRENGTHS

- Large portfolio of products and services
- High level expertise
- References all over the world
- Modern and efficient tools
- Project management
- Flexible and acting tailored to client needs
- Computer based design
- Language capabilities: Romanian, English, French, etc.
- International group

# RELEVANT PROJECTS POWER



T&D

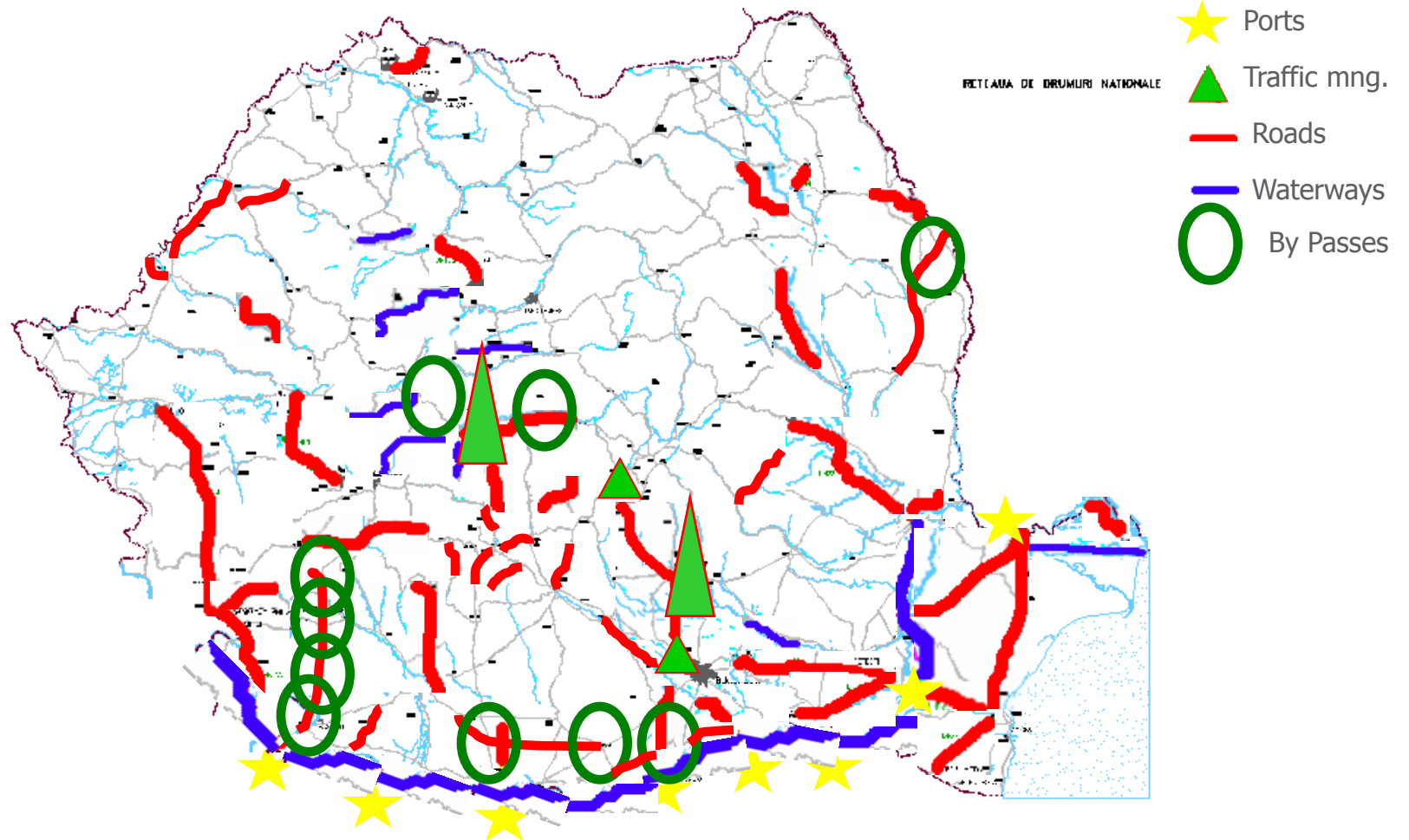


Power Plants

+

- distribution substations
- heating networks
- small or medium CHPPs

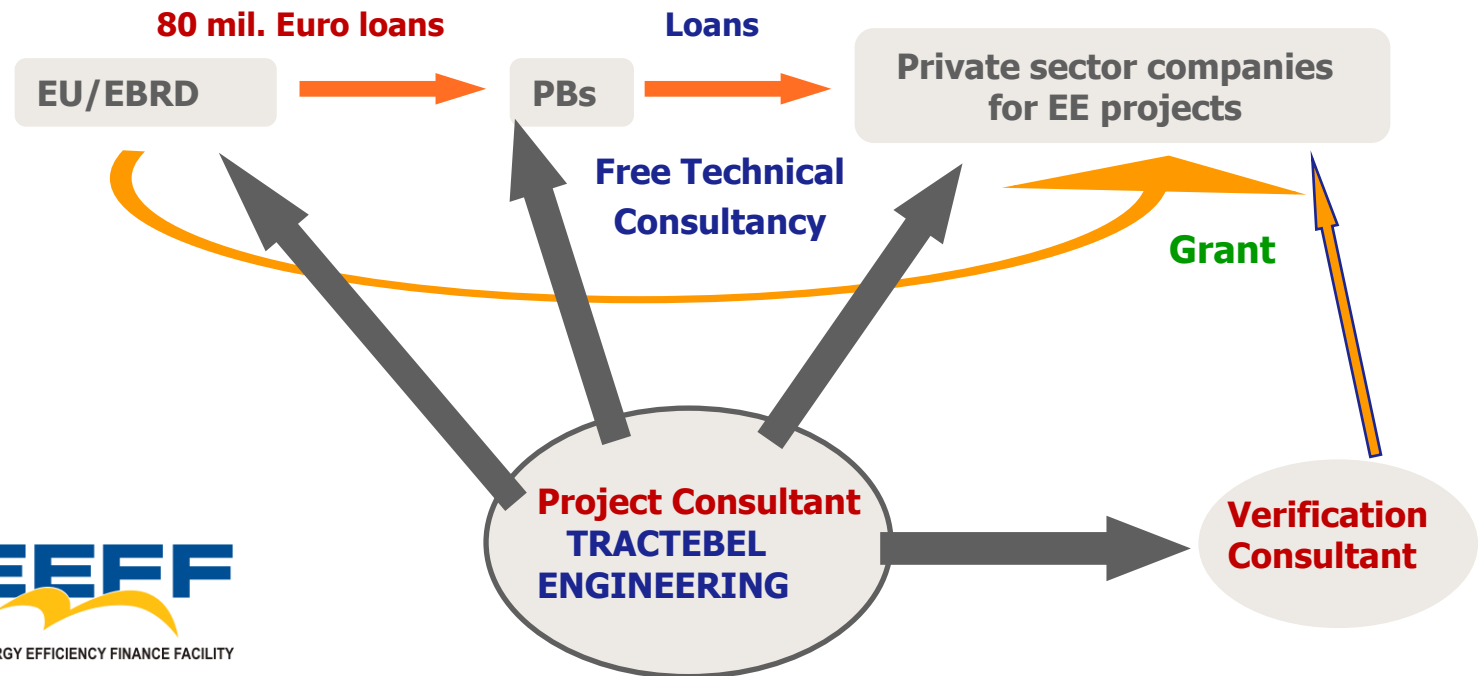
# RELEVANT PROJECTS INFRASTRUCTURE



# EU/EBRD ENERGY EFFICIENCY FINANCE FACILITY (EEFF)

- Consultancy support for Energy Efficiency Financing Facility (EEFF) for industrial end users / EU-EBRD project

**SCOPE OF THE PROJECT:** Consultancy project dedicated to support the preparation, successful operation, administration and monitoring of the Facility by providing technical, marketing and administration services



# EU/EBRD ENERGY EFFICIENCY FINANCE FACILITY (EEFF)

- A grant-supported 80 MEUR credit line for industrial, commercial, agriculture energy efficiency investments dedicated to private companies
- Private sector Romanian companies may receive:
  - Loans - of up to 2.5 million Euros from participating banks



- EU-financed free Technical Consultancy from TRACTEBEL ENGINEERING
- 15% EU grants (up to 375,000 Euros each) when investment complete

# WHAT INVESTMENTS ARE ELIGIBLE?

- Most energy efficiency investments **ARE** eligible...
  - On site co-generation of heat and electricity
  - Rehabilitation of boilers
  - Replacement of old gas boilers with condensing boilers
  - Process improvements (that save energy)
  - Steam distribution improvements (steam traps, condensate recovery)
  - Heat recovery from processes
  - Automation and control systems
  - .....and many more
- ... but some investments are **NOT** eligible:
  - Greenfield investments
  - Renewable energy investments

# OTHER EEFF RULES YOU SHOULD KNOW ABOUT...

Borrowers must be creditworthy to use the EEFF

- BCR, BRD, BT or CEC Bank's lending rules will apply

May not receive another EU grant for the same investment

- Another EU grant for the same company is OK, though

The investment must perform well (technically and economically)

- At least 20% specific energy savings and At least 10% IRR
- The free study from Tractebel Engineering will show the energy savings and IRR

# SEVEN STEPS – HOW TO FINANCE YOUR INVESTMENT

1. Discuss with Tractebel Engineering to check that your idea/project is eligible
2. Discuss with BCR, BRD, BT or CEC Bank and sign a Letter of Engagement
3. Tractebel Engineering prepares a consulting study to support your investment
4. Sign a loan agreement with BCR, BRD, BT or CEC Bank
5. Use the loan to implement the energy efficiency investment
6. Independent consultants MWH verify that the investment has taken place
7. EBRD pays the 15% grant into your bank account, in Euros





# SELECTION OF THE FINANCED EEFF INVESTMENTS ...

## EU EBRD Energy Efficiency Finance Facility - Romania

Signed sub-loans, updated 04 Nov 2010

REUP	Industrial	Activity	Type of EE	Total Cost	EEFF Loan	EU Grant	Status	Since	Estimated Emissions Reduction	Energy Saved
ID	Company		Investment	000 EUR	000 EUR	000 EUR			(t-CO <sub>2</sub> -Eq.)	(MWh/y)
1	Rom Olsena Company	Wire and nails	Buildings	72	61	9	Operating	Dec-08	67	409
2	Turnatoria Centrala Orion	Foundry	Equipment	900	551	83	Operating	Jul-09	9,486	1,669
3	Recomplast (1st sub-project)	Electricity	Equipment	97	90	14	Operating	May-09	166	38
4	Promex	Equipment	Equipment	555	473	71	Operating	Jan-10	2,774	5,167
5	Metalul Mesa	Metal products	Equipment	110	86	13	Operating	Aug-09	209	4,224
6	Lemarco Cristal	Sugar	Equipment	1,721	1,370	205	Operating	Oct-09	17,449	96,025
7	Spicul / SE-GES	Bakery	Trigeneration	1,560	1,000	150	Operating	May-10	707	3,518
8	World Machinery Works	Machines	Equipment and Buildings	425	400	60	Operating	Jul-10	334	841
9	Doosan IMGB (1st sub-project)	Steel	Equipment	1,500	1,500	225	Operating	Jun-10	4,070	19,471
10	Doosan IMGB (2nd sub-project)	Steel	Equipment	1,000	1,000	150	Operating	Jun-10	8,457	19,568
11	Cemacon	Brickmaker	Equipment	12,697	2,500	375	In progress		5,194	24,458
12	Sterk Plast	Plastics	Equipment	345	345	52	Operating	Dec-09	1,758	2,878
13	Recomplast (2nd sub-project)	Electricity	Equipment	220	138	21	Operating	Mar-09	644	1,150
14	Plimob	Furniture	Equipment	738	738	111	Operating	Dec-09	149	260
15	Moda	Clothing	Equipment	294	269	40	Operating	Mar-09	283	992
16	Indra Import-Export	Plastics	Equipment	400	360	54	Operating	Mar-09	438	753
17	Cableteam	Cables	Equipment	90	90	14	In progress		206	408
18	Timpuri Noi	Machines	Equipment and Buildings	2,500	2,417	362	In progress		1,990	5,547

# SELECTION OF THE FINANCED EEFF INVESTMENTS ...

REUP	Industrial	Activity	Type of EE	Total Cost	EEFF Loan	EU Grant	Status	Since	Estimated Emissions Reduction	Energy Saved
ID	Company		Investment	000 EUR	000 EUR	000 EUR			(t-CO2-Eq.)	(MWh/y)
19	Kubo Ice Cream	Ice cream	Equipment	1,273	1,146	172	Operating	Jul-10	1,899	1,496
20	Mirfo	Machines	Equipment	411	329	49	In progress		578	432
21	Amplast Co	Plastic packaging	Equipment	1,050	867	130	Operating	Oct-10	2,191	4,418
22	Ductil Steel, Otelu Rosu	Steel	Equipment	11,855	2,500	375	In progress		131,964	295,317
23	Rulmenti	Bearings	Equipment	364	364	55	In progress		1,957	22,762
24	Reva	Railway rolling stock	Equipment and Buildings	279	279	42	In progress		734	3,280
25	IPEC	Porcelain	Equipment	2,200	2,000	300	Operating	Oct-10	11,411	32,327
26	Petrom / SE-GES	Oil and gas	Equipment	1,422	1,100	165	Operating	Sep-10	54,756	17,958
27	Smart Impex	Wooden products	Equipment	316	268	40	In progress		46	93
28	Pion	Pastry	Equipment	282	239	36	Operating	Oct-10	224	1,103
29	Ardealul	Oil and fat	Equipment	740	740	111	In progress		2,627	16,213
30	Chimcomplex	Chemical	Cogeneration	9,725	2,500	375	Operating	Sep-10	401,600	83,030
31	Pufulete	Corn puffs	Equipment	245	180	27	Operating	Oct-10	0	122
32	Rio Bucovina	Soft drinks	Equipment	547	342	51	In progress		5	418
33	Prod Cresus	Cleaning	Equipment	47	43	6	In progress		29	491
34	Fresh Flowers	Vegetable	Equipment	160	160	24	Operating	Sep-10	1,442	1,892
35	Mega Press Holding	Printing	Equipment	2,450	2,450	368	In progress		0	13,897
36	Electrotel	Electricity	Equipment and Buildings	557	557	84	In progress		859	3,115
37	Remat Bucuresti Sud	Recycling	Equipment	668	401	60	Operating	Oct-10	848	698
	<b>TOTAL</b>			<b>59,815</b>	<b>29,855</b>	<b>4,478</b>				

# 'Real life' examples of heat and power investments financed using the EEFF...



# Borzești, Bacău

## Combined Heat and Power was a solution for this large chemicals plant

Chimcomplex - an SCR company - is a major chemicals plant... and a major energy consumer

The company

- replaced grid-based power and a conventional steam boiler...
- ... with a cogeneration unit and a heat recovery boiler

This was a major energy efficiency investment

- costing around 10 million Euro...
- ... and bringing energy savings of approximately 30%.

An EEFF credit of 2.5 million from BCR helped finance this company



# Chitila, Ifov

## This bakery invested nothing for this tri-generation plant!

SE-GES – and ESCO – provides energy services to Spicul – a bakery

- investor - SE-GES (Romanian American Enterprise Fund).
- beneficiary – Spicul Bakery.
- technical solution – Jenbacher 1 MWe tri-generation unit

The bakery lowers power, heat and cooling costs... without investing a penny!

1 MEUR of the investment from BRD Group Société Générale using the EEFF

- energy savings – approx. 3,500 MWh/year.
- financial savings from Day 1 – for no investment by Spicul
- GHG emissions reductions – approx. 700 t/CO<sub>2</sub>e/year

The EU grant will go to the bakery!



# Oprışenești, Braila

## This plant took only three months to move from 'idea' to 'online'

OMV–Petrom and SE-GES signed a Build-Own-Operate-Transfer agreement in December 2009

- OMV-Petrom is South-East Europe's largest oil and gas producer
- SE-GES finances, develops, installs and maintains cogeneration plants for industrial companies

An innovative project was designed and executed very rapidly – online by February 2010

- producing electricity for use by Petrom using high-sulphur well gas

Energy and environmental benefits are impressive

- Primary energy savings - 38,143 MWh/year
- greenhouse gas emissions savings - 54,986 t/CO<sub>2</sub>/year

The investment was financed by SE-GES using

- its own financial resources; and
- a 1.1 million Euro EEFF credit from BRD Société Générale.



# A wide range of sectors can use the EEFFF

Metals

Machine building

Oil-and-gas

Ceramics

Plastics

Chemicals

Industrial, Agricultural and Commercial Buildings

Textiles

Food and drink

Furniture

Heavy industry

Agriculture

Light industry

Hotels



# 'Real life' examples of investments financed with the EEFF – from various sectors...



## Metals sector

### State-of-the-art furnace yields hot energy savings

Ductil Steel, who manufactures steel wire in Oțelu Roșu, introduced:

- an energy-efficient electric arc furnace...
- ...with a continuous optimised shaft...
- bringing 44% specific energy savings

EEFF credit of 2.5 million Euro from BT helped this 12 million Euro investment



### Forge melts down its energy bills

Doosan IMGB is Romania's largest forging and casting company

- replaced steam boilers and rehabilitated three ovens
- introduced an Energy Management System
- ... bringing 1.5 million Euro/year in energy savings

Financed using an EEFF credit of 2.5 million Euro from BCR



## Plastics sector

### Energy-efficient extruders

Indra of Târgu Mureş, who manufactures plastic foils:

- replaced one of its five extruders..
- ...lowering specific energy consumption by 42%

EEFF credit of 360,000 Euro from BCR towards this 400,000 Euro investment



### Energy-efficient moulding machines

Sterk Plast of Constanţa, who manufactures household plastic items:

- bought an injection moulding machine and blow moulding machine
- payback – less than two years.
- monthly energy savings more than costs of servicing the loan

Financed using an EEFF credit of 345,000 Euro from Banca Transilvania



# Textiles sector

## Energy efficiency is always in fashion

Moda, Arad – made four types of investments

- replaced the electrical and ventilation systems
- replaced a textile cutting machine
- replaced compressors and pumps
- modernised a steam and hot water boilers
- achieving 35% energy savings

Financed with an EEFF credit of 294,000 Euro from BRD



## Material cost savings for a dry cleaner

Prod Cresus, Bacau

- manufacturer clothes and runs a dry cleaning service
- replaced a steam boiler and a dry cleaning machine...
- found 31% energy savings

EEFF credit of 42,500 Euro from CEC Bank



## Food sector

### Sweet energy savings...

Lemarco Cristal of Urziceni, Ialomița – a sugar processor – invested in:

- a steam plant, a conveyor system, a packaging plant...
- a water system a compressed air system, capacitors
- ... bringing 37% energy savings

EEFF credit of 1.3 million Euro from BRD Société Générale

### Crunchy energy savings!

Pufulete of Bușag, Maramureș – produces corn puffs coated with oil and salt

- retired two older extrusion machines
- bought a new, larger, more energy-efficient model...
- ... so energy use 'per corn puff' fell by 44%

EEFF credit of 180,000 Euro from BRD Société Générale



# Wood processing

## Sanding, milling, mortising and more...

Plimob - Sighetu Marmăției, Maramureș – a furniture manufacture:

- invested in new sanding, milling, mortising machines,
- fully-automated robotic varnishing in an electrostratic field
- replaced an exhaust installation, modernised an assembly line
- the result: 36% energy savings, payback in 4 years

Financed with an EEFF credit of 738,000 Euro from BRD Société Générale



## An energy-saving robotic polishing line

Smart Impex of Moftinu Mare, Maramureș – a coffin maker – invested in:

- two polishing lines (robotic polisher pictured), a finishing line
- a panel gluing press and production streamlining
- the result: specific energy savings of 63%

Financed using an EEFF credit of 269,000 Euro from CEC Bank



## Heavy industry

### 47% energy savings 'on track'

REVA Simeria – who builds and repairs railway rolling stock:

- replaced a steam boiler and two forge stoves
- recovered heat from its compressed air production facility
- rehabilitated its compressed air networks
- insulated its production hall

EEFF credit of 280,000 Euro from BCR

### 25% energy savings 'dredged up'

Promex, Brăila – a metallurgical company

- produces castings, turned and forged parts and makes earth-moving, road, construction and naval equipment
- modernised a heat treatment furnace and a lathe

EEFF credit of 473,000 Euro from BCR



# Agricultural sector

## Blooming energy savings

Fresh Flowers of Lehliu Gară, Calarași – is Romania's largest tulip grower

- replaced the greenhouse heating system
- built a better-insulated cold storage unit
- achieved 28% energy savings

Financed using an EEFF credit of 160,000 Euro from Banca Transilvania



## Carbon-neutral technical solution

Ardeal of Carei, Satu Mare refines edible oils and animal feed meal

- replaced two old steam boilers...
- ... with a new sunflower seed shell-fired steam boiler
- achieved 17% energy savings

Financed using an EEFF credit of 740,000 Euro from BRD Société Générale



# Examples of technologies being financed using the EEFF...

Replacing equipment

Boilers

New technologies

Compressors

Heat recovery

Machines

Cooling

Building insulation

Replacing production lines

Lighting

Automation

Cogeneration

Relocation

Energy management systems

Trigeneration

Ovens

... and more



# Relocation – an opportunity to become more energy-efficient

## Compressors manufacture relocates

Timpuri Noi relocated to Jilava on the outskirts of Bucharest, and:

- insulated its new production hall; replaced older equipment;
- installed a modern heating system and solar-assisted hot water
- The result: 52% energy savings

Investment of almost 2.5 million Euro using an EEFF credit from BCR



## Bakery relocates and uses an ESCO

Spicul bakery relocated from Bucharest to Chitila, Ilfov and signed...

- a Build-Own-Operate-Transfer agreement with SE-GES
- who installed a Jenbacher 1 MWe tri-generation unit
- so bakery lowers power, heat and cooling costs... without investing

SE-GES financing included a 1 million Euro EEFF credit from BRD



## Replacing equipment

### Energy *inefficiency* – is like throwing away money!

Amplast of Lerești, Argeș, who makes throw-away plastic packaging

- replaced five smaller thermoforming machines...
- ... with two larger thermoforming machines
- achieving 79% specific energy savings

Financed using an EEFF credit of approx. 1 million Euro from BCR

### Energy *efficiency* – is like printing money!

Mega Press Holding – a large printing house and media group

- retired three rotary printing presses...
- and introduced a single larger rotary printing press
- which brought 59% energy savings

Financing – a EEFF credit of 2.45 million Euro from BRD Société Générale



# New technologies

## A hot way to save energy

Metalul Mesa of Salonta, who makes forged steel parts and specialist tools

- installed an inductive heating technology...  
... to replace old, inefficient gas furnaces like this one
- and replaced old air compressors with a single new compressor
- achieving energy savings of more than 70%

Financed with an EEFF credit of 86,000 Euro from BCR



## A cool way to save energy

Kubo Ice Cream Company, who makes 'Amicci' Ice Cream

- retired a freon-based cooling system...  
... and introduced an ammonia-based cooling system
- yielding both environmental benefits and energy savings

EEFF credit of approx 1.1 million Euro from BRD Société Générale



# Heat recovery

## Waste heat to steam...

Rulmenți of Bârlad – a manufacturer of bearings and bearing elements

- who already had energy-efficient combined heat and power (CHP)...
- ... became even more energy efficient - by installing a recuperating boiler to produce saturated steam from CHP combustion gases
- Energy savings: 20% - 59% (depending on the steam demand)

Financed with an EEFF credit of 360,000 Euro from BCR

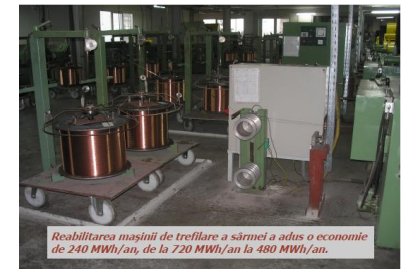


## Waste heat to hot water...

Cableteam of Sighișoara – a cable manufacturer:

- fed heat recovered from an air compressor to the hot water system...
- ...and modernised a wiredrawing machine
- 43% energy savings pay for the investment in less than three years

Financed with an EEFF credit of 90,000 Euro from BCR



# Machines

## Energy bills cut (and rolled and pressed)

Recomplast of Buzău, who makes parts for the power network, invested in:

- oxy-fuel and plasma cutter; screw-thread rolling machine;
- an automatic press with mechanical feeding line;
- medium frequency inductive heating system

Financed using EEFF credits totaling around 200,000 Euro from BCR

## Boring machine brings interesting energy savings!

Mirfo of Târgu Jiu manufactures machine tools and welded sub-assemblies

- modernised a boring machine and two overhead cranes
- and introduced an innovative natural daylighting system (pictured)
- Result: 39% energy savings, health and productivity benefits

EEFF credit of 329,000 Euro from BT towards this 411,000 investment



# Building insulation

## Lower heating costs...

World Machinery Works (WMW) is a machine builder, operating from Bacau

- modernised its heating system and insulated the production building
- saving energy and improving comfort levels for the workforce

Financed with an EEFF credit of 400,000 Euro from CEC Bank

## ... and a cosy workforce

Rom Olsena Company of Târgu Mureş manufactures nails and wire

- transformed a draughty old industrial hall into this modern-looking unit
- insulated roof, windows and doors – installed a modern boiler
- achieved 48% energy savings

Financed with an EEFF credit of 61,000 Euro from CEC Bank



# Self-generation of heat and power

## Combined heat and power investment brings 30% energy savings

Chimcomplex of Onești, Bacău – is a major chemicals plant

- Replaced grid-based power and a conventional steam boiler...
- ... with a cogeneration unit and a heat recovery boiler

his 10 million Euro investment included a 2.5 Euro EEFF credit from BCR

## Power investment saves 55,000 tons of CO<sub>2</sub>/year

OMV–Petrom's site at Opreșenești, Braila has high-sulphur well gas

- The ESCO SE-GES installed a power plant to use the gas...
- ... make electricity to help meet OMV-Petrom's power needs

SE-GES financing included a 1.1 million Euro EEFF credit from BRD

The EU has indicated that CHP is a priority – so may allow EEFF financing for investments of > 2.5 MEUR and for non-industrial sectors such as hotels.



# Automation

## A simple-and-effective way to bake some energy savings

Pion of Mediaș, Sibiu bakes cakes, pastries, cookies, sweets and wafers

- replaced a conventional wafer baking line with an automatic one...
- lowering energy consumption per wafer by 64%

Financed using a 239,000 Euro EEFF credit from CEC Bank



## Robots save energy in Alba Iulia

IPEC of Alba Iulia manufacturers household porcelain articles for IKEA

- introduced two new glazing lines (with robotics)
- replaced an oven replacing two presses
- Production capacity up 60%; specific energy consumption down 55%

Financed using a two million Euro EEFF credit from BCR



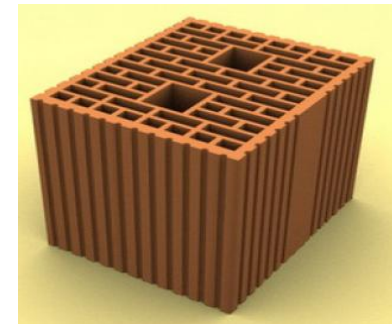
# Updating production lines

## Energy efficiency – an investment as solid as a...

Cemacon, Zalău, one of Romania's largest brick makers

- replaced an old ceramic block production line with a new one..
- ... including a tunnel kiln and a tunnel dryer
- lowering energy use per block
- 12.7 million Euro (of 28.4 million) was energy-efficiency related

Of which maximum EEFF credit of 2.5 million Euro financed by BCR



## A sparkling example of energy efficiency

Rio Bucovina of Vatra Dornei is a producer of table mineral water

- Modernized a bottling line
- Replaced an ozone generator
- Lowered energy and environmental emissions by 22%

Financed with a 342,000 Euro EEFF credit from BRD Société Générale



# If YOU would like to apply for a loan, free technical consultancy and an EU grant...

- Contact the EEFF team at Tractebel Engineering...
  - EEFF Helpline - 031 224 8104, eeff@eeff.ro
- ... or visit us online
  - [www.eeff.ro](http://www.eeff.ro)
- ... or contact any participating bank



# QUESTIONS?



# Thank you for your attention

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