
GREEN ECONOMY FINANCING FACILITY

Where finance and green technology meet

‘Financing Energy Efficiency in Romania, Hungary and Bulgaria’

EU Conference, Bucharest, 1st February 2018

TRACTEBEL



GEFF

Green Economy Financing Facility

Developed by:



European Bank
for Reconstruction and Development

Supported by:



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

The EBRD Green Economy Financing Facility



Mark will present then take questions with Participating Financial Institutions

Mark Velody

GEFF Facility Consultant
Tractebel Engineering

www.ebrdgeff.com/romania



Ioan Marcu
&
Robert Szilagy

Banca Transilvania

www.bancatransilvania.ro



Sorin Dragulin

UniCredit Bank &
UniCredit Consumer Financing

www.unicredit.ro

www.ucfin.ro



The EBRD Green Economy Financing Facility



1

Green Economy Transition (GET)

2

Green Economy Financing Facility

3

GEFFs in Romania 2008-2018

4

The new residential GEFF in Romania

5

Q&A with Banca Transilvania & UniCredit

The EBRD Green Economy Financing Facility



1

Green Economy Transition (GET)

2

Green Economy Financing Facility

3

GEFFs in Romania 2008-2018

4

The new residential GEFF in Romania

5

Q&A with Banca Transilvania & UniCredit

1



1. GREEN ECONOMY TRANSITION

Context: EBRD's G.E.T. approach

- The EBRD has adopted a sequence of cross-sectoral strategies to mainstream green financing operations.
- The 'GET approach' goes beyond EBRD's Sustainable Energy and Sustainable Resource initiatives which supported energy efficiency and renewable energy investment.
- GET involves not only energy efficiency and renewables, but also water efficiency, climate change resilience, waste minimisation, materials efficiency, pollution control and environmental improvement.
- GET emphasises innovation and uses capacity-building, policy dialogue, multiple delivery channels.

G.E.T.

**Green Economy Transition
approach
from 2016**



**S.E.I.
Sustainable Energy Initiative
from 2006**

The EBRD Green Economy Financing Facility



1 Green Economy Transition (GET)

2 **Green Economy Financing Facility**

3 GEFFs in Romania 2008-2018

4 The new residential GEFF in Romania

5 Q&A with Banca Transilvania & UniCredit



2. GREEN ECONOMY FINANCING FACILITY

- A financing initiative in Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, **Bulgaria**, Croatia, Egypt, FYR Macedonia, Georgia, **Hungary**, Kazakhstan, Kosovo, Kyrgyz Republic, Moldova, Mongolia, Montenegro, Morocco, Poland, **Romania**, Russia, Serbia, Slovak Republic, Tajikistan, Turkey and Ukraine.
- Transition from the Sustainable Energy Finance Facility (**SEFF**) to Green Economy Financing Facility under the new GET approach.
- Combines **technical knowledge** with **finance** to help clients invest in high performing technologies.
- Impact (so far) of almost **four billion EUR** of EBRD GEFF financing:
 - **120,000** clients of **130** local financial institutions avoid...
 - ... almost **seven million tonnes of CO₂ emissions per year**.





2. GREEN ECONOMY FINANCING FACILITY

EBRD SEFF developed projects with different looks, websites and procedures...

... tailored to local market conditions





2. GREEN ECONOMY FINANCING FACILITY

EBRD SEFF developed projects with different looks, websites and procedures...

... tailored to local market conditions... including three facilities in Romania





2. GREEN ECONOMY FINANCING FACILITY

EBRD GEFF brings a single look, a single website and standard procedures...

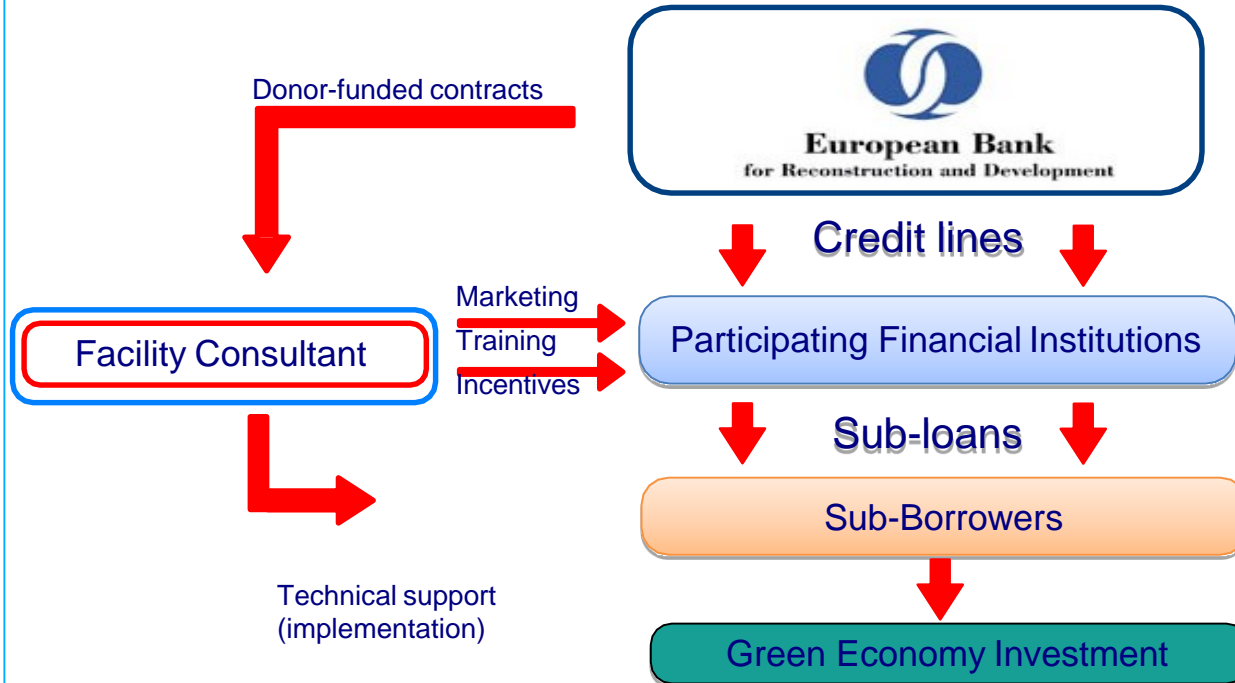
... while maintaining flexibility to tailor facilities to local country conditions





2. GREEN ECONOMY FINANCING FACILITY

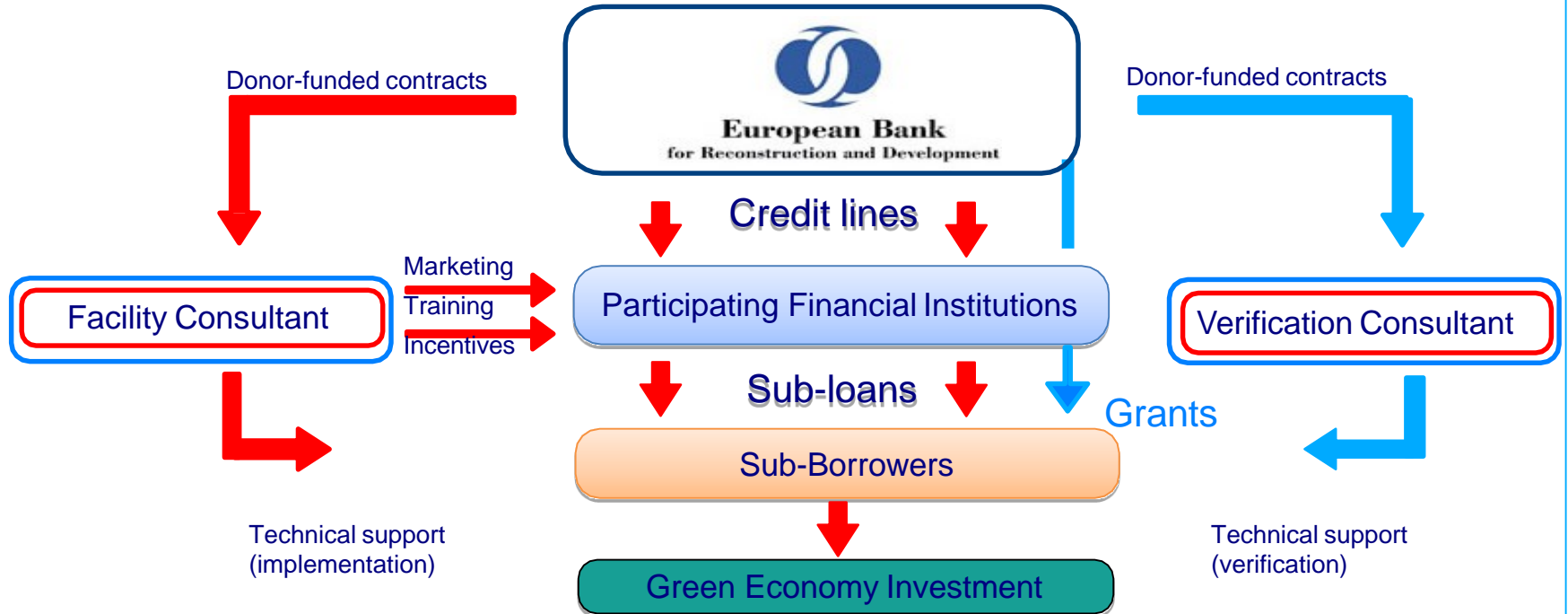
Some characteristics are common to (almost) all EBRD GEFFs





2. GREEN ECONOMY FINANCING FACILITY

GEFFs that feature grants to sub-borrowers also feature independent verification



The EBRD Green Economy Financing Facility



1

Green Economy Transition (GET)

2

Green Economy Financing Facility

3

GEFFs in Romania 2008-2018

4

The new residential GEFF in Romania

5

Q&A with Banca Transilvania & UniCredit





3. GEFFS IN ROMANIA 2008-2018

EBRD GEFFs have financed sustainable energy investments in Romania since 2008

Energy Efficiency



Do more with less

Renewable Energy



Capture renewable energy resources from the sun, soil, wind, water or earth





3. GEFFS IN ROMANIA 2008-2018

Tractebel Engineering has worked with EBRD on GEFFs in Romania for 10 years....



6 partner banks

BCR, BRD, Banca Transilvania,
CEC Bank OTP Raiffeisen

129

industrial investments
totaling
111 MEUR



1 partner bank

BRD

3

municipal investments
totaling
10 MEUR



4 partner banks

BCR BRD
Banca Transilvania, UniCredit

341

SME investments,
totaling
68 MEUR

And now...



3. GEFFS IN ROMANIA, 2008-2018

Tractebel is again helping EBRD to roll out financing for energy efficiency in Romania...



6 partner banks

BCR, BRD, Banca Transilvania,
CEC Bank OTP Raiffeisen

129

industrial investments
totaling

111 MEUR



1 partner bank

BRD

3

municipal investments
totaling

10 MEUR



4 partner banks

BCR BRD
Banca Transilvania, UniCredit

341

SME investments,
totaling

68 MEUR



2 partner banks

Banca Transilvania, UniCredit

A recent

100 MEUR

residential

framework

... but it is the first time we have worked together on the **household** sector



3. GEFFS IN ROMANIA 2008-2018

The first GEFF in Romania was the EU EBRD Energy Efficiency Finance Facility (EEFF) for private sector **industrial** companies:

- **Loans** – up to 2.5 MEUR per company from participating banks
- Free (EU financed) **technical consultancy** from Tractebel Engineering
- EU **grants** of 15% of the loan value (max. 375,000 Euro each)

Results

- 129 investments totaling 111 million Euro



The first GEFF in Romania.



Donor support from the European Union



3. GEFFS IN ROMANIA 2008-2018

The EU EBRD **Municipal** Fund for Energy Efficiency (MFFEE) financed streetlighting.

- An experimental GEFF with 10 million Euro, one participating bank.
- **Loans** of up to 5 million Euro per investment
- Free (EU financed) **technical consultancy** from Tractebel Engineering
- EU **grants** (to the municipality) of 20% of the loan value

Results

- Three public lighting investments totaling 10 million Euro



MFFEE used private sector ESCO financing for public sector energy efficiency



Donor support from the European Union



3. GEFFS IN ROMANIA 2008-2018

The EU EBRD Romania Sustainable Energy Finance Facility (RoSEFF) financed **SMEs**

- **Loans** to a wide range of private sector SMEs through four participating financial institutions.
- Free (EU financed) **technical consultancy** from Tractebel Engineering
- EU **grants** of 10% or 15% of the loan value
- Fast-track technical eligibility for small, simple projects using a **Technology Selector** (list of eligible measures and equipment)

Results

- 341 investments totaling 69 million Euro



RoSEFF financed small and medium sized enterprises.



Donor support from the European Union



3. GEFFS IN ROMANIA 2008-2018

The new **residential** GEFF in Romania features

- **Concessional financing** from Taiwan ICDF for EBRD loans to Banca Transilvania and UniCredit
- GEF financing for **consultancy** by Tractebel Engineering
- There are **no grants** for end users (unlike previous GEFFs)

Eligible investments include

- **Pre-approved** measures that meet defined performance standards from an online **GEFF Technology Selector**
- **Assessed** investments with a free **Assessment** (report) that demonstrates technical eligibility.



GEFF finances investments that improve energy efficiency, water efficiency or use renewable energy in households.



Donor support from Taiwan ICDF and the Global Environment facility



3. GEFFS IN ROMANIA 2008-2018

GEFFs finance robust investments by robust investors

- Sub-borrowers (investors) must be creditworthy
- Investments must be energy efficiency or renewable energy
- Specific rules vary from GEFF-to-GEFF

Investments must be green economy investments

- Either: Assessed individually to bring minimum 20% specific energy savings;
- Or: Selected from a database of eligible technologies that meet defined energy performance standards.



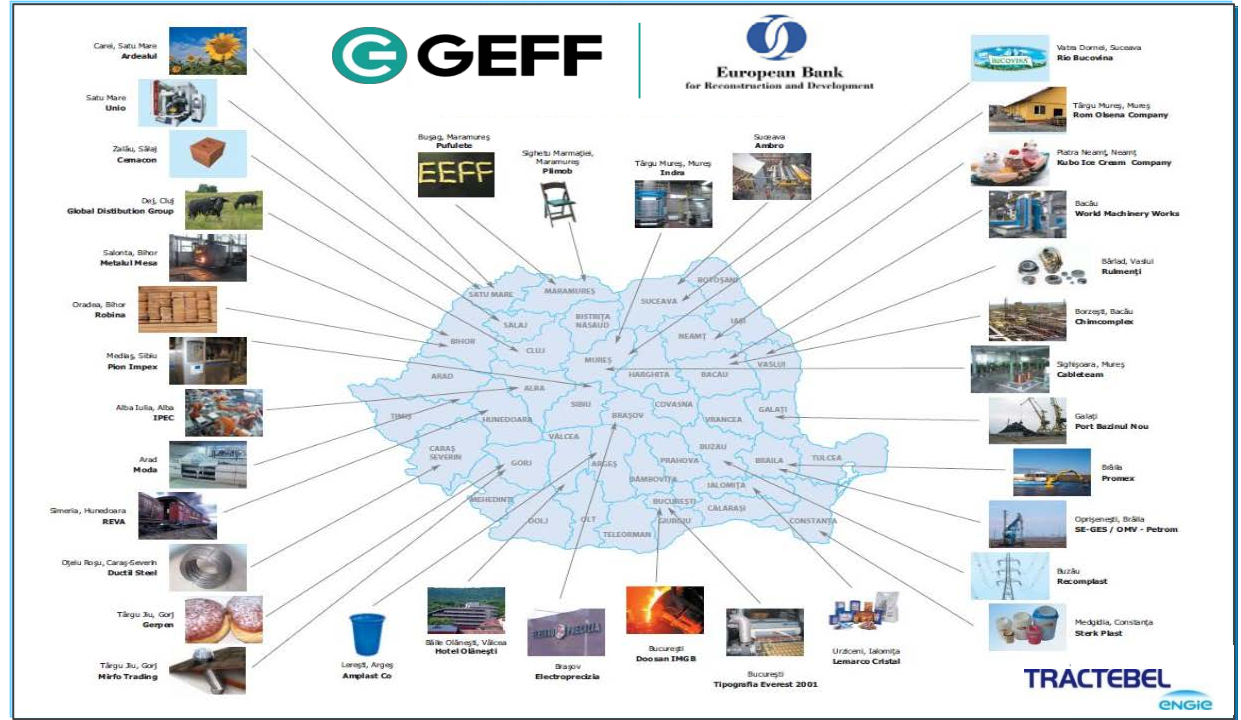
Companies make green economy investments for commercial reasons; households for **lifestyle**, comfort and financial savings.



3. GEFES IN ROMANIA 2008-2018

GEFFs have wide geographical outreach

- The Facility Consultant trains local PFI branches in how to recognise and act upon energy efficiency lending opportunities...
- ... so outreach is as wide as the branch networks of the local banks





3. GEFES IN ROMANIA 2008-2018

GEFFs help investors to afford better **technologies**



Production lines



Automation



Compressors



CNC machines



Lifting



Lighting



Cogeneration



Motors



Vehicles



Shaping



Solar



Biomass/biogas



Hydroelectricity



Insulation



Combustion



Heat recovery



Cooling/chilling

and more...



3. GEFFS IN ROMANIA 2008-2018

GEFFs have financed energy efficiency in a very wide range of **sectors**



Metalworking



Plastics



Retail



Hotels



Textiles



Baking



Wood sector



Housing



Agriculture



Printing



Machine building



Paper



Hydroelectricity



Public lighting



Automotive



Civil engineering



Food and drinks

and more...



3. GEFES IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and offline publications
- Short movies
- Technical case studies
- Awards events
- Public events
- A technical Help Desk
- Training
- Site visits
- ... and much more....

Sighirna, Hung
Callalium – a producer of electric, electronic and magnetic coils – used a GEFES loan to invest in a new production line for coils. The new line is more efficient and has a lower energy consumption.

Rada
Reta – a manufacturer of equipment for the agricultural sector, is training and educating its employees – used a GEFES loan to invest in a new production line for coils. The new line is more efficient and has a lower energy consumption.

Reta
Reta – a manufacturer of equipment for the agricultural sector, is training and educating its employees – used a GEFES loan to invest in a new production line for coils. The new line is more efficient and has a lower energy consumption.

World Machinery Works
World Machinery Works – a machine tool manufacturer – used a GEFES loan to invest in a new production line for coils. The new line is more efficient and has a lower energy consumption.

Romania's largest forging and casting company invests in energy efficiency and melts down its energy bills

Highlights

- Total energy consumption reduction: almost 50% and
- Reduction of CO2 emissions: almost 100,000 tons
- Investment payback: 1.5 years
- Energy efficiency: 100% EEFES loan from EBR
- Overall economic benefits: 2.2 million EUR/year
- Production: 100,000 tons/year
- GEFES loan: 1.5 million EUR

DOOSAN IMGB – is the largest forging and casting company in Romania. Activities include liquid steel production, casting, forging, thermal treatment and machinery assembly.

As part of one of the most energy-intensive industries, Doosan IMGB recognized the need to invest in energy efficiency and reduce its energy consumption. The investment was financed using the EU EBR's Energy Efficiency Finance Facility.

Following analysis by Tractebel Engineering, Doosan IMGB decided to invest in energy efficiency measures.

- Replacement of the existing steam plant, bringing fuel and operation cost savings and better reliability
- Installation of an Energy Management System to monitor and optimize electricity and natural gas consumption
- Rehabilitation of three furnaces to reduce the electrical energy and natural gas consumption and increase the number of metal parts that may be thermally treated by the furnaces.

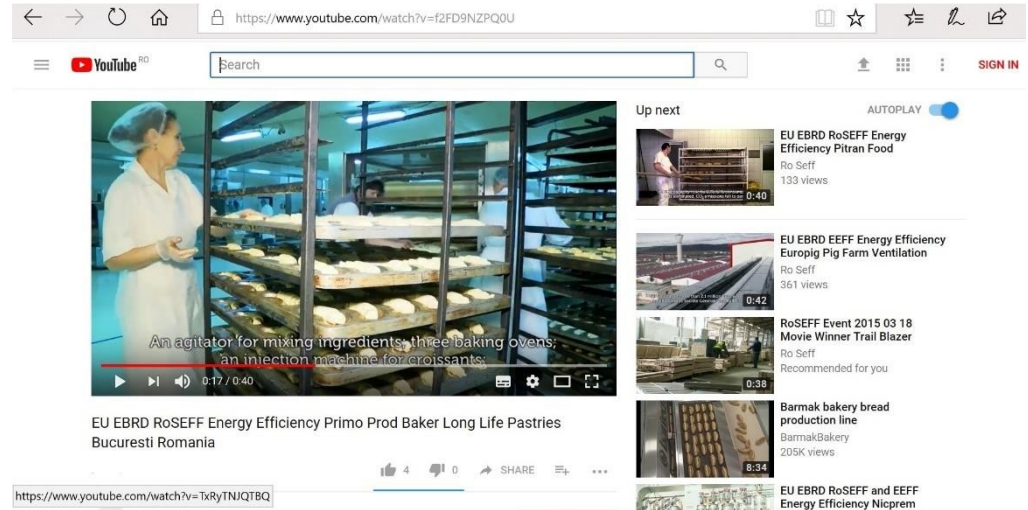
Targeted information for specialist audiences highlight benefits of investing in energy efficiency and renewable energy.



3. GEFES IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and Offline publications
- **Short movies**
- Technical case studies
- Awards events
- Public events
- A technical Help Desk
- Training
- Site visits
- ... and much more....



More than 70 EEEF and RoSEFF clips about successful investments may be found on YouTube



3. GEFES IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and Offline publications
- Short movies
- **Technical case studies**
- Awards events
- Public events
- A technical Help Desk
- Training
- Site visits
- ... and much more....

The screenshot shows a case study document with the following content:

EUROPEAN UNION **European Bank for Reconstruction and Development** **EEFF** **TRACTEBEL Engineering GDF SUEZ**

Dairy installs a biogas boiler to capture energy from waste products... ... and lowers its need for light fuel oil by 27%

NATURAL PRODUCTS - AND NATURAL ENERGY SOLUTION
COMALAT produces and markets milk, sour cream, cheese and yoghurt using traditional Romanian recipes. Operating from the village of Nanov, Teleorman County, the company processes milk from a large number of small local herds.
The availability of whey and dry biomass — both waste products from the dairy processes — represented an opportunity for this company to invest in sustainable energy solutions.

TECHNICAL SOLUTIONS
Tractebel Engineering (GDF SUEZ) prepared bankable documentation to support a package of both renewable energy and energy efficiency solutions — a biogas boiler, an absorption chiller and heat recovery from combustion gases. The package both introduced a carbon-neutral fuel source to displace some of the company's need for light fuel oil and also lowered overall energy consumption by 881 MWh/year.

FINANCING
Banca Comercială Română loaned 257 900 Euro for Comalat's investments, which qualified for financing under the EUI/ERFD Energy Efficiency Finance Facility, so the company is eligible for an EU grant of 18% as well as EU-financed technical consultancy.

IMPACT OF THE INVESTMENT ON THE COMPANY
Comalat's use of light fuel oil falls from 3,084 MWh/year to 2,211 MWh/year, and greenhouse gas emissions fall by 165 tons/year.

Whey and dry biomass are feedstock for Comalat's new biogas-fired boiler.

HIGHLIGHTS

- An investment of 25 / 900 euro — fully financed using the EBF
- 27% fuel savings
- 57% greenhouse gas emissions reductions
- Introduction of a carbon neutral fuel to partially replace a carbon-based fuel — as biogas will partially displace LFO in the company's fuel mix
- A **replicable** investment: — similar technical solutions may be adopted by other dairies

For more information on how Romanian companies may receive EU-subsidised financing for energy efficiency investments, please visit www.eeff.ro or call 031 224 0104.
This document has been produced with the financial assistance of the European Union.

Interesting and replicable investments are typically written up as case studies

3. GEFFS IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and Offline publications
- Short movies
- Technical case studies
- **Awards events**
- Public events
- A technical Help Desk
- Training
- Site visits
- ... and much more....



Gala Awards events recognise companies who chose to prioritise sustainable energy investments



3. GEFFS IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and Offline publications
- Short movies
- Technical case studies
- Awards events
- **Public events**
- A technical Help Desk
- Training
- Site visits
- ... and much more....



Launch of the new residential GEFF in
Romania, June 27th 2017



3. GEFFS IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and Offline publications
- Short movies
- Technical case studies
- Awards events
- Public events
- **A technical Help Desk**
- Training
- Site visits
- ... and much more....



Contact

GEFF Help Desk

Tel. 031 22 48 104



3. GEFFS IN ROMANIA 2008-2015

GEFFs raise awareness

- Online and Offline publications
- Short movies
- Technical case studies
- Awards events
- Public events
- A technical Help Desk
- **Training**
- Site visits
- ... and much more....

'Financing Sustainable Energy'

1. Why Sustainable Energy?

- What is Energy Efficiency? What is Renewable Energy?
- Why banks and their clients need to understand sustainable energy

2. Typical Energy Efficiency Investments

- Industry – Machines/Production – Combustion – Cooling – Processes
- Buildings – Energy Management Systems – CHP – Heat Pumps

3. Typical Renewable Energy Investments

- Renewable Heat: Solar – Biomass – Biogas – Biofuels – Geothermal
- Renewable Electricity: Wind – PV – Hydro – Bio – RES-E Economics

4. Economics of Sustainable Energy

- Cash Flow – DCF – NPV – Payback – IRR Sensitivity Analysis
- Balance Sheet Financing – Project Financing – Third Party Financing

5. Subsidies for Sustainable Energy

- Green Certificates – White Certificates – EU ETS – Structural Funds
- Cogeneration Bonus – Casa Verde – Other/future subsidies

Training bankers is a core GEFF activity.



3. GEFFS IN ROMANIA 2008-2018

GEFFs raise awareness

- Online and Offline publications
- Short movies
- Technical case studies
- Awards events
- Public events
- A technical Help Desk
- Training
- **Site visits**
- ... and much more....



Specialist engineers from Tractebel Engineering visit sub-borrowers to identify technically and financially sound energy-saving opportunities.



3. GEFFS IN ROMANIA 2008-2018

GEFFs are streamlined

- Well-designed systems
- Rapid technical approval

Investment proposals move fast

- Simple online procedures for standard investments.
- Rapid, effective, free technical consultancy for complex projects

Independent verification

- For investments with EU grants

BUREAUCRACY



Investors do not want to wait – so rapid response and lightweight procedures are integral features of GEFFs

The EBRD Green Economy Financing Facility



1

Green Economy Transition (GET)

2

Green Economy Financing Facility

3

GEFFs in Romania 2008-2018

4

The new residential GEFF in Romania

5

Q&A with Banca Transilvania & UniCredit

4



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Tractebel is again helping EBRD to roll out financing for energy efficiency in Romania...



6 partner banks

BCR, BRD, Banca Transilvania,
CEC Bank OTP Raiffeisen

129

industrial investments
totaling
111 MEUR



1 partner bank

BRD

3

municipal investments
totaling
10 MEUR



4 partner banks

BCR BRD
Banca Transilvania, UniCredit

341

SME investments,
totaling
68 MEUR

... and now...



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Tractebel is again helping EBRD to roll out financing for energy efficiency in Romania...



6 partner banks

BCR, BRD, Banca Transilvania,
CEC Bank OTP Raiffeisen

129

industrial investments
totaling

111 MEUR



1 partner bank

BRD

3

municipal investments
totaling

10 MEUR



4 partner banks

BCR BRD
Banca Transilvania, UniCredit

341

SME investments,
totaling

68 MEUR



2 partner banks

Banca Transilvania, UniCredit

A recent

100 MEUR

residential
framework

... but it is the first time we have worked together on the **household** sector

4. THE NEW RESIDENTIAL GEF IN ROMANIA

The latest GEF was launched in Romania on 27th June 2017

- A 100 MEUR EBRD financing framework for the household sector

Donors

- Taiwan ICDF provides concessional financing through EBRD
- Global Environment Facility (GEF) finances consultant support

Participating Financial Institutions (PFIs)

- Banca Transilvania with 40 MEUR
- UniCredit Bank and UniCredit Consumer Financing with 45 MEUR

Facility Consultant (FC)

- Tractebel Engineering consortium – technical consultants





4. THE NEW RESIDENTIAL GEF IN ROMANIA

EBRD designed GEF to be flexible, enabling PFIs to choose how to bring green energy investments to into households

- Credits of up to 100,000 Euro for physical persons for eligible green economy investments in the home; and
- Credits of up to 5 million Euro for multi-household buildings and for businesses who supply households with green economy goods and services.

PFIs have chosen to focus on physical persons

- **Home mortgages** for energy-efficient homes;
- **Consumer loans** for green economy products;
- **Credit card payments** for green economy products from selected retailers who partner with PFIs;

What are eligible household investments?



1. Energy-efficient homes
2. Home renovation products
3. Energy or water-saving home products (boilers, fridges...)
4. Home renewables (solar systems, biomass boilers...)

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

There are two procedures... fast and very fast!

GEFF Assessment

A (free) GEFF report from Tractebel Engineering that confirms technical eligibility to be financed using GEFF



GEFF Technology Selector (TS)

An online list of pre-approved technologies that meet high technical performance standards



L.E.D.



Air conditioners



Refrigeration



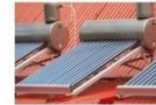
Heat pumps



Insulation



Windows/doors



Solar hot water



Photovoltaics



Condensing gas boilers



Biomass systems



Hot water cylinders





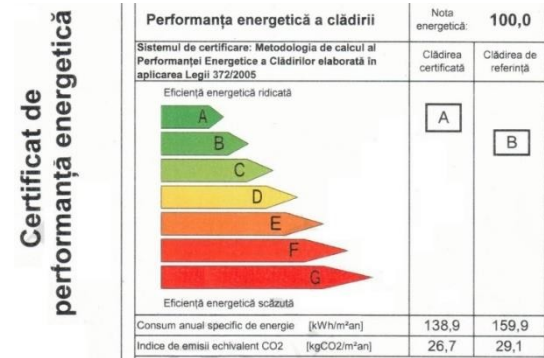
4. THE NEW RESIDENTIAL GEFF IN ROMANIA

GEFF home mortgages

- New and recent homes with an **EPC** (Energy Performance Certificate) of 'A' or '**upper B**' are technically eligible for GEFF.
- Older homes and major renovation projects may be eligible if the FC can demonstrate that **20% energy savings** will be achieved.

Every GEFF home mortgage receives a (free) **Assessment**

- **Standard mortgages** for dwellings that already have an eligible EPC receive a simplified Assessment **within two days**. (We also check that various EBRD financing rules satisfied).
- **Non-standard mortgages** receive a full Assessment which takes a little longer. (e.g. for older homes, or refurbishments, or new home under construction that don't have an EPC yet).



New and recent homes with an EPC rating of A or 'upper-B' are **technically eligible** to be financed using GEFF.



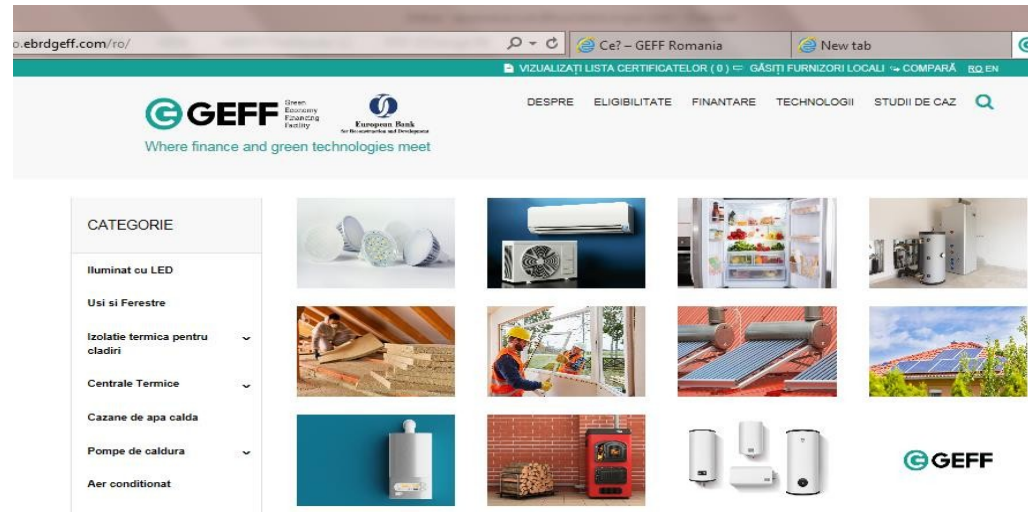
4. THE NEW RESIDENTIAL GEFF IN ROMANIA

The GEFF Technology Selector

- An online list of **high-performing household technologies**
- Pre-approved to be financed using GEFF – no technical Assessment is required

The Technology Selector is an open list

- Home lighting, heating, air conditioning, refrigeration, windows, insulation, more...
- All models meet clearly defined, published technical performance standards.
- Adding equipment to the list is free...



Click 'Technology Selector' at www.ebrdgeff.com/romania



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

The GEFF Technology Selector includes

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Lighting improvements are simple way to save energy in the home

- **LED lighting** come in a wide range of 'warm' and 'cold' colours
- **Controls** like presence sensors, day-night controls; and even smartphone apps. can control lighting levels and lower costs.
- **Typical energy savings:** up to **80%** if replace conventional lighting.
- **GEFF eligibility rule:**
 - **Equipment:** LED lamps rated ≥ 80 lumens/Watt
 - **Other:** auxiliary/installation costs up to 20%

GEFF Technology Selector



**LED lighting
rated ≥ 80 lumens/Watt**

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

A cool home can be achieved in several ways

- **Shade** south-facing windows;
- **Insulate** – to keep air-conditioned rooms cool in summer (and heated rooms warm in winter).
- Select an **energy-efficient air conditioner** model;
- Make sure it is **correctly sized** for the space
- **Typical energy savings:** Replacing an old air conditioner with a new, correctly-sized energy-efficient model can cut your cooling bills by 45% - or more if combined with shading and insulation.
- **GEFF eligibility rule:** Energy Label **A++** or **A+++**

GEFF Technology Selector



**Air conditioners with
Energy Label
A++ or A+++**

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Did you know that your fridge uses more electricity than your washing machine?

- Surprising, but true (in most homes) as your **refrigerator** consumes electricity 24 hours-a-day, 365 days-a-year. It is one of the biggest energy consumers in our homes.
- **Typical energy savings:**
 - Replacing a quite modern A+ model with an A+++ model can almost half your electricity use.
 - Replacing a 10-15 year old fridge with a new, A+++ model can bring up to 70% electricity savings.
- **GEFF eligibility rule:** Energy Label **A++** or **A+++**

GEFF Technology Selector



**Fridges and freezers
with Energy Label
A++ or A+++**

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Heat pumps are not a solution for everyone, but can be a good alternative to electric heating and cooling

- The ground beneath our homes and gardens always stays at a roughly constant temperature. A **heat pump** system uses this for both winter heating and summer cooling.
- A well-designed system to replace conventional electric heating and air conditioning may be a viable household investment.
- **Typical energy savings:** in an ideal application – up to **80%**.
- **GEFF Eligibility rules:**
 - **Equipment:** Coefficient of Performance \geq **CoP 4.3**
 - **Other:** Auxiliary/installation costs up to **50%**

GEFF Technology Selector



**Ground or water-source
heat pumps \geq CoP 4.3**

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Insulation for your home is a 'lifestyle' investment that:

- **Thermal insulation** saves money on heating and cooling your home;
- Keeps you **warm** in winter and **cool** in summer; and
- Improves the **looks and value** of your home

Walls, basements, roofs, windows, doors

- **Typical energy savings:** insulating the building envelope can lower heating and cooling costs by **more than 30%**.
- **GEFF eligibility rules:** **Equipment** rules for insulation are a bit long and technical for this presentation, so please see website. **Other** eligible auxiliary/ installation costs are **50%** for insulation and **15%** for sealed double-or-triple glazed **windows and doors**.

GEFF Technology Selector



Thermal insulation of walls, roofs, basements



Sealed glazing
U-Value ≤ 1.3 W/m²K

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Hot water for your family doesn't need to be expensive!

- Washing represents a substantial part of household energy costs. A **solar-assisted hot water** system pre-heats water entering the hot water system, which lowers use of gas, fuel or electricity.
- **Vacuum tubes** are a better technology than **flat plates**. A well-insulated hot water cylinder maximises energy cost savings.
- **Typical energy savings 65%** (more in summer, less in winter).
- **GEFF eligibility rules:**
 - **Equipment** –the entire system providing that solar collectors have a **Solar Keymark** (or are $\geq 75\%$ efficient)
 - **Other:** installation: labour costs up to a ceiling of 15%

GEFF Technology Selector



Solar collectors with
this Solar Keymark
are GEFF compatible



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

A photovoltaic (PV) system installed on the roof of your home converts sunlight into free electricity!

- **Typical energy savings:** A **PV** system offsets your electricity consumption 1:1, so every 1 kWh that you generate at home is 1 kWh that you don't need to buy from your electricity supplier.
- **GEFF Eligibility rules:**
 - **Equipment:** PV panels electrical efficiency $\geq 14\%$ and the **rest of the solar system** including inverters, cables, connection boxes and auxiliary equipment are considered to be eligible costs
 - **Other:** installation costs up to a ceiling of **15%** over-and-above eligible equipment costs are eligible costs

GEFF Technology Selector



If PV panels are $\geq 14\%$ efficient, the entire system is GEFF-compatible



4. THE NEW RESIDENTIAL GEFF IN ROMANIA'

Condensing gas boilers are smart!

- An old-fashioned conventional gas boiler pumps hot exhaust gases out of your home through the flue. A **condensing** gas boiler captures the heat before it pumps out the exhaust gases. The heat is redirected back where it belongs - into your home. The result: **more heat for less money**.
- **Typical energy savings:** changing an old boiler for a condensing model can lower natural gas consumption by up to **20%**.
- **GEFF eligibility Rules:**
 - **Equipment:** only **condensing** models
 - **Other:** installation costs of up to 10% over-and-above the cost of the eligible boiler.

GEFF Technology Selector



Only *condensing* gas boilers are GEFF-compatible

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Biomass appliances

- **Biomass boilers and stoves** typically use low cost wooden logs and briquettes. Pellets boilers are a more expensive but more convenient solution as a pellets boiler can 'feed itself' with fuel.
- **Typical energy savings:** Replacing an old biomass boiler with a sophisticated modern model can lower fuel consumption by **20%**.
- **GEFF eligibility rules:**
 - **Equipment** that achieves a thermal efficiency $\geq 85\%$.
 - **Other:** Delivery and installation up to **10%**

GEFF Technology Selector



Wood is the most popular biomass fuel.



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Hot water cylinders

- A **well-insulated hot-water cylinder** (tank) is a simple, effective way to save money
- Avoid re-heating water that you already heated.
- All non-instantaneous hot water systems (that pre-heat and store water) can benefit from this technical solution
- **Typical energy savings** – Replacing an old, poorly-insulated tank with a well-insulated one can lower costs by **up to 50%**.
- **GEFF eligibility rules:** Energy label ‘A’ or ‘B’

GEFF Technology Selector



Insulated hot water cylinders with energy labels ‘A’ or ‘B’



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Is it better to use a personal loan or a credit card to buy from the TechnologySelector?

Personal loans

Advantage for the customer: may buy eligible technologies from any retailer.

but

Slightly more bureaucratic than a typical loan – an additional form to complete

vs.

Credit cards

Advantage for the customer: no forms to complete (zero bureaucracy!)

but

Only possible at defined retailers with partnership agreements with a PFI.

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Procedure a **personal loan** for items from the Technology Selector

- Borrower must complete and sign a **short, simple form**, with:
 - A table of eligible equipment with check boxes for what will be acquired with the loan and in what proportion (fridge? solar? insulation? etc).
 - A declaration: “I intend to use the credit to buy energy efficiency, renewable energy and/or water saving technologies for which GEFF Eligibility Certificates are shown in the Technology Selector at www.ebrdgeff.com/romania”.
 - This data is required so stakeholders know how GEFF financing is used
- The form is **additional to the PFI’s normal loan application procedures**.
 - Includes clear explanatory notes (for the customer and the loan officer).

The image shows a table titled 'TABLE OF ELIGIBLE TECHNOLOGIES' from the GEFF (Green Economy Financing Facility) project. The table has three columns: 'Technology', 'Phase 1a Eligible', and 'Cost as % of loan'. The table lists various technologies such as Refrigerators with energy label A++ or A+++, Heat pumps with energy label A++ or A+++, LED lighting, Solar hot water systems, and Energy Management Systems. Each row has a checkbox in the 'Phase 1a Eligible' column. Below the table, there are several footnotes providing additional information about the eligibility criteria and the scope of the GEFF project.

The GEFF form has two sides of clear, information and ‘check boxes’

4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Using **credit cards** for items on the Technology Selector

- BT set up successful one-month GEFF pilot with eMAG for **A++** and **A+++** refrigerators, freezers and air conditioners.
- Household customers who used a BT StarCard received a 50 RON eMAG voucher and 10 months **interest-free credit**.
- Promotion started on day of the official GEFF launch, 27.6.2017 and led to 149 transactions totalling more than 50,000Euro.
- **This model works very well**, so may be extended
- A **non-bureaucratic** way to deliver green economy financing within an existing product... so no separate application is needed.
- Interest-free credit makes energy-saving products **affordable**.



Romania is the first GEFF to successfully use credit cards to finance green economy investments.



4. THE NEW RESIDENTIAL GEFF IN ROMANIA

Apply to use the GEFF at Banca Transilvania or UniCredit branches, or online



www.ebrdgeff.com/romania

links to EBRD GEFF product pages of Participating Financial Institutions



www.bancatransilvania.ro



www.unicredit.ro

www.ucfin.ro

The EBRD Green Economy Financing Facility



1

Green Economy Transition (GET)

2

Green Economy Financing Facility

3

GEFFs in Romania 2008-2018

4

The new residential GEFF in Romania

5

Q&A with Banca Transilvania & UniCredit

5



5. Q&A WITH BANCA TRANSILVANIA AND UNICREDIT

So it's time to introduce the GEF Participating Financial Institutions...



Ioan Marcu & Robert Szilagyi

for

Banca Transilvania



Sorin Dragulin

for

**UniCredit Bank &
UniCredit Consumer Financing**

GEFF Help Desk
021 224 8104

romania@ebrdgeff.com

www.ebrdgeff.com/romania

TRACTEBEL




GEFF

Green Economy Financing Facility

Developed by:



European Bank
for Reconstruction and Development

Supported by:



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET