

FINANCING ENERGY EFFICIENCY IN ROMANIA, HUNGARY AND BULGARIA



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Event organised in the frame of the Sustainable Energy Investment Forums contract funded by the Horizon 2020 programme of the European Union

As part of the "Smart Finance for Smart Buildings" initiative, the European Commission is organising a series of "Sustainable Energy Investment (SEI) Forums" to enhance the capacity of and co-operation between public and private stakeholders to develop large-scale investment programmes and financing schemes. The SEI Forums will consist of more than 30 events in up to 15 Member States in 2016-2019; information on past and upcoming events can be found on the [SEI Forums webpage](#).

Most of the projects presented at this event were selected under the Horizon 2020 Energy Efficiency call for proposals managed by the European Commission's Executive Agency for Small and Medium-sized Enterprises (EASME). More information about those funding opportunities are regularly summarised and updated on the [EASME webpage](#) dedicated to energy efficiency finance.

Table of contents

Executive summary.....	4
Background to the event	7
OPENING SPEECHES	8
PLENARY SESSION 1: European and national policy context	10
European policy in support of energy efficiency investments.....	10
European Structural and Investment Funds	11
Mobilising the financial sector on energy efficiency	12
Financing the future of buildings in Central, Eastern and South-East Europe	13
State of play of energy efficiency investments in Romania, Hungary and Bulgaria.....	14
PLENARY SESSION 2: Improving the performance of residential buildings.....	17
Home renovation loans in Hungary	17
Renovating multifamily buildings through energy performance contracting in Latvia ..	18
The Green Homes and Mortgage Initiative in Romania	19
Reaction from panel of stakeholders	21
PARALLEL SESSION A: Making energy efficiency investible.....	23
Structuring investor-ready energy efficiency projects	23
The EEFIG Underwriting Toolkit and the De-Risking EE Platform (DEEP).....	24
EBRD Green Economy Financing Facility (GEFF)	25
PARALLEL SESSION B: Energy renovation of public buildings and the role of ESCOs	27
Legal framework for energy performance contracting (EPC) in Portugal.....	27
Regional one-stop-shop centre for the renovation of public buildings in Rhodope region (Bulgaria).....	28
The Bulgarian Energy Efficiency Fund and the role of energy service companies.....	29
Developing the ESCO market in Romania.....	30
PARALLEL SESSION C: Energy Efficiency in the Industry and SME sectors.....	32
Lending to industrial energy efficiency projects	32
Energy efficiency investment projects in the Romanian industry and SME sectors	33
Bank experience on industrial energy efficiency investments	34
Company experience on industrial energy efficiency investments.....	36
CLOSING PLENARY SESSION	37
Short reports from parallel sessions by Chairs	37
Reaction by panel of stakeholders.....	40
Closing remarks	43

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EXECUTIVE SUMMARY

This event gathered 182 participants (263 registered) working on energy efficiency finance from the financial sector, national governments, project developers, the renovation supply chain and local and regional agencies. Taking place over one day, the event was structured as indicated below:

- Opening speeches
- Plenary session 1: European and national policy context
- Plenary session 2: Improving the energy performance of residential buildings
- Parallel session A: Making energy efficiency investible
- Parallel session B: Energy renovation of public buildings and the role of ESCOs
- Parallel session C: Energy efficiency in the industry and SME sectors
- Closing plenary session

The conference hosted speakers from across Europe. Through the presentations and discussion, the following key points emerged:

- Several speakers highlighted a documented increase in energy efficiency in the region. Thus, some progress is evident, and banks have initiated credit lines for energy efficiency. This indicates some level of commitment; however, the potential is high and there are still many barriers to overcome. Major efforts are still needed.
- New forms of financial instruments are starting to emerge, e.g. based on green mortgage products, but there is much greater scope for their deployment in the region. Public funds should be more efficiently used to draw in private investment, but appropriate risk and reward sharing mechanisms are needed.
- The countries in the CESEC region have allocated a significant amount from the Cohesion Fund. Romania is particularly active in utilising these funds. Currently, 94% is used for grants and the rest for financial instruments; looking ahead, this needs to be reversed.
- In relation to the European Fund for Strategic Investments (EFSI) there are relatively few energy efficiency projects in the region compared to other parts of Europe. Also, regarding the European Investment Bank (EIB) there is an imbalance.
- Generally, all stakeholders represented at the meeting called for enhanced cooperation, including the banking sector, to unblock and overcome obstacles and jointly develop strategies and solutions. This should also be seen in relation to the need to develop a more supportive national framework.
- There is a need to bring all stakeholders together and favour an integrated approach involving knowledge transfer and capacity building.

- Several speakers highlighted the need to more efficiently involve and empower citizens, including assisting housing owner associations in attracting funding. In this context it is also important to address mitigation of energy poverty.
- It is also important to assist cities/public authorities in their roles as facilitators for energy efficiency investments in the private sector. In this context particularly, energy agencies drew attention to the fact that Romanian cities and regions still need to benefit from the EIB ELENA Programme and the money managed under H2020 for Project Development Assistance.

The plenary session on the residential sector and the various parallel sessions gave interesting insights and discussion on how to tackle the barriers and opportunities within the various sectors.

The plenary session on **“Improving the performance of residential buildings”** presented a new well-functioning incentive scheme recently launched by the Hungarian Development Bank for energy efficiency in the residential sector and based on the European Structural and Investment Fund (ESIF). An important success factor has been proactive marketing and communication towards potential beneficiaries.

Further, the Latvian Baltic Energy Efficiency Facility was presented. This is a promising initiative which uses proceeds from energy savings to de-risk and finance large scale deep renovation.

A promising initiative in Romania is the green mortgage programme, which was presented by the Romania Green Building Council (RoGBC). They have co-developed with Raiffeisen Bank this programme based on an innovative Green Homes Certification to assess and recognise top performing residential projects utilising sustainable construction principles.

The major conclusion from the parallel session on **“Making energy efficiency investible”** relates to the lack of standards in project development and documents, which makes it difficult for banks and investors to trust that the energy savings generated will be a reliable source of revenue.

Two of the projects presented within the session dealt with standardisation: the [Investor Confidence Project \(ICP-Europe\)](#) and the [Energy Efficiency Risk Valuation and Underwriting Toolkit](#) for financial institutions published recently by the Energy Efficiency Financial Institutions Group ([EEFIG](#)). ICP seeks to standardise the project development process and includes monitoring of the project development process to improve reliability. The EEFIG Toolkit is helping financial institutions to evaluate and understand risks, bringing a shared language in evaluating investments and helping to create projects that are better aligned to the needs of financial institutions.

A recently established European Bank for Reconstruction and Development (EBRD) credit line in Romania for the residential sector was also presented (GEFF – Green Energy Financing Facility), which offers various products including **home mortgages** to buy low-energy new houses and apartments.

Other conclusions from the session include the need to establish a closer connection between all the relevant stakeholders working in the field and the need for more education

and training in energy efficiency. In this context energy efficiency should be introduced as a lifestyle, a choice for healthy living. And consumers or clients should be proactively engaged by banks.

The parallel session on “**Energy renovation of public buildings and the role of ESCOs**” addressed the importance of a legal framework in relation to public procurement and accounting.

The need to identify and develop projects was also addressed, which requires huge efforts and money. Two projects presented how they are doing this in Portugal and Bulgaria with the help of project development facilities. Both projects are focusing on “one-stop-shop” facilities for smart finance in smart buildings. Basically, local authorities don’t have the capacity to develop the projects – they need support from entities on national or regional level.

Further, the needs of the energy service company (ESCO) to access finance was discussed. The Bulgarian Energy Efficiency Fund, which was presented, was highlighted as a good role model since they are providing loans and guarantees for ESCOs. However, Romanian ESCOs feel that they are lagging behind, particularly in terms of the legal framework, which should be considered a first stepping stone to develop the ESCO market.

The third and last parallel session on “**Energy efficiency in the industry and SME sectors**” included a presentation of the Romanian Energy Efficiency Fund (FREE) as a good example of assisting the industrial sector in financing projects on a commercial basis.

Further, the session addressed the many problems still to be overcome within the sector. Some energy efficiency gains have been achieved but the release of the overall large potential will require better access to financing through new financing schemes and new instruments to decrease investment risks.

There is an increasing trend among some SMEs to focus on energy efficiency, which amongst other is proven by the activities of ProCredit Bank. As shown by their presentation they are actively pursuing the SME potential through their Green Finance Loan portfolio. However, many barriers are still to be overcome to reach out to all SMEs, which was particularly stressed by the Romanian Association of Banks during the event.

Many large-scale industrial companies have carried out energy efficiency projects, amongst other reasons to improve their competitiveness in their markets. In this relation ALRO was presented as a good example of a company that not only focuses on direct energy benefits but also on non-energy benefits derived from energy efficiency projects.

BACKGROUND TO THE EVENT

The Energy Union Framework Strategy puts energy efficiency as one of its five dimensions and states it is to be treated as an energy source. The ambitious Paris climate agreement also underlines the importance of energy efficiency. Investments in energy efficiency have proven to be one of the most cost-effective ways to support the transition to a low-carbon economy. Not only does it help the EU in turning its climate ambition into climate action, it also brings several significant benefits for European citizens and companies in terms of environment, health, security of supply, lower energy bills, more jobs and sustainable growth.

To realise the full potential of energy efficiency, public funds will not suffice, and private financing will have to be unlocked at scale. In this context, energy policy should create more favourable investment conditions, encourage demand for energy efficiency and help consumers undertake energy efficiency investments more easily.

The event aimed to share best practice from Romania, Hungary and Bulgaria as well as further countries on how energy efficiency investments can be financed. This includes the use of private funds and innovative financing instruments, notably in the building and industrial sectors. Speakers focused on practical experience in developing and structuring investment programmes and the event allowed time for debate. The event also contributed to the Commission Initiative on Central and South-Eastern European Energy Connectivity (CESEC).

Copies of all presentations from the event can be found at:

<https://ec.europa.eu/energy/en/events/financing-energy-efficiency-romania-hungary-and-bulgaria>

OPENING SPEECHES

Anton Anton – Minister of Energy, Romania



Mr Anton mentioned the event as a good opportunity for everyone and was pleased to start his period as Minister of Energy with a conference on energy efficiency.

He referred to the overall monitoring of energy consumption, which indicates some increase in energy efficiency. However, there is still a long way to go and he particularly highlighted needs related to heating and cooling, water pumps, street lighting, efficient transportation and industries.

The public consider investments in energy efficiency to reduce costs and improve the environment, but there is still a big challenge ahead to convince the population to implement energy efficiency. Mr Anton stressed that a dramatic change is needed, and he believes SMEs will have a crucial role in this process.

He also referred to the need to establish proper financing schemes and referred to the crucial role of cities in implementing energy efficiency in public buildings and as facilitators for investments in the private sector.

Mr Anton further stated that the priority of his mandate is investment in the energy sector, with the intention of developing a new energy strategy to protect the current production mix, including finding solutions for the big pollution problems connected with coal-fired power generation, which makes up one third of the production mix.

Mihaela Virginia Toader, State Secretary, Minister of Regional Development, Public Administration and European Funds, Romania



Ms Toader mentioned the event as a good opportunity to prepare for post 2020. We must be ready also after 2020, including preparing our business environment.

She then referred to experience from the EU funding programmes.

As to residential buildings there is a good number of projects already, but there is a big need to particularly support housing owner associations in attracting funding.

Regarding public buildings, hospitals and schools particularly are in need of investments to create better indoor climate and safer building environments. One million euros was

allocated in the form of grants and calls re-opened in 2017.

She further referred to negotiations with the European Commission on using other funds for supporting seven cities outside Bucharest to improve their heating systems.

There is a need to improve the knowledge base of SMEs on energy efficiency measures. SMEs are important for the economy and energy efficiency measures will help to improve their competitiveness. It is important to consider that SMEs are very diverse and have different requirements for an energy efficiency effort and are generally too small to have expertise or focus on energy consumption. Supporting energy efficiency in SMEs should not only rely on grants: there is a need to develop new innovative financial instruments for energy efficiency in SMEs, and even in large enterprises.

2020 is quite close, we need a paradigm shift and to prepare the market.

PLENARY SESSION 1: EUROPEAN AND NATIONAL POLICY CONTEXT

Chaired by Robert Tudorache, Secretary of State of Ministry of Energy, Romania



European policy in support of energy efficiency investments

Tudor Constantinescu, Principal Adviser to the Director General for Energy, European Commission



Mr Constantinescu stated that the regional perspective is very important to succeed in increasing energy efficiency.

He presented the EU's goals of putting energy efficiency first, demonstrating global leadership in renewables and delivering a fair social transition for consumers. He further listed the eight legislative proposals related to the Clean Energy for All Europeans package.

He mentioned the Eco-design Working Plan 2016-2019, which set out an indicative list of product groups that are considered as priorities for the adoption of implementing measures. Further, it is seen as an important part of the Circular Economy package.

It is important to give a clear signal to investors that the clean energy transition is the growth sector of the future, both through adapting legislation and putting on the table an enabling environment.

Through the Cohesion Policy, funds are allocated for energy efficiency in the CESEC region (2016 – 2020). For Romania over €1.2 billion is allocated (public buildings, residential buildings, SMEs, large enterprises).

In 2016-20 the average investments needed is €269 billion/year to reach binding 2020 targets. If we want to reach the 2030 targets we need to invest €379 billion/year (according to EUCO30 scenario).

Not only EU funds can achieve this: substantial support is needed from the private sector which needs to be mobilised to finance projects. The “Smart Finance for Smart Buildings” initiative, together with other EU policy initiatives for smart buildings, aims to unlock a total of €10 billion in public and private funds between now and 2020 for energy efficiency projects.

The Smart Finance for Buildings initiative entails three pillars:

1. More effective use of public funds – including facilitating financial instruments and EFSI blending with European Structural and Investment Funds (ESIF).
2. Assistance and aggregation - including supporting Project Development Assistance (PDA) facilities and "one-stop-shops"
3. De-risking - Understanding the risks and benefits for financiers and investors via the Energy Efficiency Financial Institutions Group (EEFIG) and putting in place a commonly accepted underwriting framework.

Within this framework there are to be developed specific approaches and instruments per Member State or even at regional level.

As to providing aggregation and assistance for project development, Mr. Constantinescu highlighted the ELENA via EIB (PDA facility funded through the European Commission's Horizon 2020 programme) and the PDA calls launched by EASME for smaller projects.

[Link to presentation](#)

European Structural and Investment Funds

Damien Cocard, Programme Manager, Directorate-General for Regional and Urban Policy, European Commission



ESIFs are delivered through multi-annual programmes at national or at regional level. They mainly consist of grants but there is an increasing focus on the use of financial instruments.

The ESIF is implemented by Member States and their regions under shared management (The Commission has no direct role in selection or implementation of projects).

ESIFs have geographical and sectoral eligibility criteria as stipulated in the regulations, programmes and national eligibility rules.

There are huge needs both in public and residential building stocks and structural funds can work as an accelerator for smart refurbishing. In Romania, for example, €1 billion is allocated for energy efficiency in public and residential buildings.

Mr Cocard stressed that it is now important to focus on implementation. The money is available, now it needs to be spent on concrete projects which benefit the citizens.

The 2014–2020 framework is based on a performance-oriented legal framework to promote the use of financial instruments and should as such increase use of financial instruments by attracting private financing and developing markets.

Not all projects (investments) can be supported with Financial Instruments (FI)s. The activity must be generating income/revenue/cost savings to ensure repayment of investment. The decision to deliver Operation Programme/Rural Development Programme support through FIs is with the managing authority. Mr Cocard underlined that FIs and grants are used for different purposes and capacity is needed to know how to use them in the optimal way.

Both ESIF and EFSI bring significant investment volume into Europe (together around €800 billion) and they pursue globally similar objectives in the same sectors. They form part of distinct frameworks but can be used in a complementary manner and can be combined.

In his conclusion Mr Cocard highlighted the reformed Cohesion Policy as an important driver for energy efficiency investments for the 2014-2020 period, which will provide continuous support to the development of energy efficiency and renewable energy systems in Bulgaria, Hungary and Romania. It will be important to make the most of the existing instruments (grants and financial instruments). Political support is needed, and he called for a discussion on concrete needs to be further addressed by the Romanian authorities.

[Link to presentation](#)

Mobilising the financial sector on energy efficiency

Martin Schoenberg, Energy Efficiency Project Coordinator, United Nations Environment Programme Finance Initiative (UNEP FI)



The [UNEP Finance Initiative](#) is a partnership between the UN and the finance sector in which most members are banks. Through the partnership there is increasing focus on positive impacts through finance and on long-term value creation. The mandate of the initiative is to change finance to be able to finance change.

Energy efficiency investment is driven by its value premium; nevertheless, further action is required to upscale investment levels. Global business as usual until 2035 would leave most energy efficiency potential untapped. The highest untapped potential is within the building sector.

Some signs in the market indicates that the energy efficiency investment market is growing, and energy efficiency improvement is gaining pace despite falling oil prices.

Main challenges in scaling up energy efficiency investment include:

- Complexity; wide range of financing structures necessary for investments across sectors and asset classes;
- Deal size: small ticket size causes need for aggregation;
- Embedder transactions: energy efficiency investment is mostly integrated into other transactions, such as real estate refinancing;
- Coordination: there is a need for common frameworks for project developers, investors, financiers and project hosts.

To mainstream energy efficiency, the investment market needs to combine concessionary finance with risk sharing and standardisation. In relation to this Mr Schönberg mentioned the EEFIG initiative which in its second phase made major contributions to progressive standardisation and mainstreaming through the De-Risking Energy Efficiency Platform (now covering data for more than 10,000 industry and building projects) and the EEFIG Underwriting Toolkit (Value and Risk Appraisal Guide).

Further, the G20 Energy Efficiency Investment Toolkit was presented, which was endorsed during the G20 Hamburg summit. The Toolkit provides a collaborative architecture for policy-makers and Finance Institution to scale-up energy efficiency investments and realise the significant economic, environmental and social benefits of energy efficiency in their economies. The Toolkit collects experiences from 15 participating G20 countries.

[Link to presentation](#)

Financing the future of buildings in Central, Eastern and South-East Europe

Oliver Rapf, Executive Director, Buildings Performance Institute Europe (BPIE)



Mr Rapf presented a snapshot of the current building stock distributed according to current Energy Performance Certificate (EPC) rating and mentioned this as a starting point to understand the big challenge we are facing ahead of us to invest in energy efficiency in buildings.

The countries in the CESEC region have allocated a significant amount from the Cohesion Fund. Romania invests €3 per m²

which is pretty good (in Hungary and Bulgaria it is only around €1 per m²); with a leverage factor of 10 with other financial instruments in addition we could then reach deep renovation. Currently, 94% are used for grants and the rest for sophisticated financial instruments; we need to reverse this.

In relation to the EFSI there is a lack of energy projects in the region (according to research by BPIE). Only 2 out of 66 EFSI energy projects are in South East Europe (€100 million out of more than €8 billion). Neither of these two is dedicated to energy efficiency in buildings.

Also, regarding the EIB there is an imbalance. Other EU countries receive almost three times as much EIB financing per capita as CESEC countries (€57 compared to €22). Only 8.5% of energy loans are directed to SEE countries and here no projects are dedicated to energy efficiency in buildings. Generally, the international financial institutions have little investment in demand-side infrastructure compared to the supply-side.

What strategic actions are needed to change this? We need to consider buildings as part of the energy infrastructure system (we need to change the perception and think demand side), and we need to leverage not only private finance but also institutional finance (pension funds etc.).

We need to bring all stakeholders together and favour an integrated approach. This involves knowledge transfer and capacity building (going beyond ELENA) and a project aggregation mechanism (e.g. through regional platforms). And we need to make sure that these mechanisms are attractive enough for institutional investors.

[Link to presentation](#)

State of play of energy efficiency investments in Romania, Hungary and Bulgaria

Elena Popescu, General Director, Directorate for Energy Policy, Ministry of Energy, Romania



Ms Elena Popescu initially introduced the current primary legislation on energy efficiency in Romania.

According to forecasting Romania will achieve its target of reducing primary energy consumption by 19% in 2020. Further efforts are needed to reduce the primary energy intensity. Romania's primary energy intensity of 0.227 toe/€1000 is estimated to be 1.89 times higher than the EU-28 average.

She further listed current available financing solutions.

As to obstacles in financing energy efficiency projects she mentioned reduced capability of many beneficiaries to prepare and implement projects causing delays in obtaining authorisations and permits from various state authorities; public procurement delaying projects due to procedural claims; delays caused by bankruptcies of beneficiaries and inability to provide co-financing in many cases.

To overcome obstacles, she mentioned ESCOs as key to co-finance projects and to improve projects by assisting in the planning, preparation and implementation phases.

Ms Popescu mentioned energy efficiency as one of the priorities within the energy policy. Energy efficiency should also be used as a measure to diminish energy poverty and consumers should be efficiently informed about the benefits of energy efficiency as well as funding/financing opportunities. She further mentioned that EU funds remain an important source for financing for energy efficiency projects.

[Link to presentation](#)

Bálint Varga, Desk Officer, Department for Green Economy Development, Ministry of National Development, Hungary



The National Hungarian Energy Efficiency Advisory Network consists of 76 government offices located round the country. Their tasks include collection and monitoring of energy consumption data, assistance in awareness-raising activities about energy efficiency, and support for the development of action plans for energy savings. In the case of companies the network provides energy consulting services and encourages energy audits.

Corporate tax benefits are the most popular incentives and an efficient measure for promoting energy efficiency. If a company implements energy efficiency investments, the company becomes eligible either (the company can decide) for a one-time tax benefit in the year after the investment has been implemented or for five years of incentives. The tax benefit can be 30% of the eligible costs of the investment, but not more than €15 million (+20% for small enterprises, +10% for medium-sized enterprises).

Another measure includes investments supported by national energy efficiency programmes (financed by quota revenues, central financial resources or based on intergovernmental agreements etc.), such as e.g. the Warm Home Programme managed by HFB (Hungarian Development Bank).

Furthermore, investments are supported by specific government decisions, e.g. the Modern Cities Programme and programmes aiming primarily at energy efficiency under the Operational Programmes of Hungary.

[Link to presentation](#)

**Veneta Tzvetkova, Director, Energy Projects and International Co-operation
Directorate, Ministry of Energy, Bulgaria**



Ms Tzvetkova presented joint initiatives of the Bulgarian government with the EBRD, the EU and KIDSF (Kozloduy International Decommissioning Support Fund).

This relates back to the EU accession process in 2004 where Bulgaria was initiating a programme to shut down the oldest units of the Kozloduy Nuclear Power Plant, which produced 40% of the country's electricity.

In this challenging context, the EBRD introduced a new model of private sector credit lines in Bulgaria, which aimed to make businesses and households more energy efficient and to replace the lost generation capacity with renewable energy production. Sustainable Energy Financing Facilities (SEFFs) combine EBRD credit lines to local partner banks with donor-funded technical assistance and financial incentives for the final borrowers and partner banks.

In Bulgaria, the SEFF model created a market for energy efficiency and renewable energy. Based on the experience in Bulgaria the SEFF model is operating in 20 countries, with total EBRD financing of more than €2 billion.

The Residential Energy Efficiency Credit Line (REECL) includes an €84.3 million credit line complemented by €50 million from the EBRD and €24.6 million from KIDSF (available until 31 December 2018). It aims to give householders, condominiums/associations of apartment owners, housing management companies, ESCOs or any other eligible service companies across Bulgaria an opportunity to realise the benefits of energy efficiency home improvements by providing them with loans and investment incentives through local participating banks. It has committed to 817 energy efficiency loans.

Established in 2004, the Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERECL) was the first SEFF introduced by the EBRD. It is a credit facility offered by the EBRD, the Bulgarian government and the EU in the form of loan, grant and consulting services towards industries and SMEs (for renewable energy and energy efficiency projects).

The BEERECL, which closed in 2014, provided financing to 291 projects through eight commercial banks, disbursing €150 million of financing leveraged by €35.2 million of concessional funding that included technical assistance grants and incentives (€ 24.4 million KIDSF grants awarded to businesses).

[Link to presentation](#)

PLENARY SESSION 2: IMPROVING THE PERFORMANCE OF RESIDENTIAL BUILDINGS

Chaired by Ion Dogeanu, Executive Director, Local Energy Agency Bucharest (AEEPM)



Home renovation loans in Hungary

Sándor Szabó, Director, Sales and Customer Relations Directorate, Hungarian Development Bank



The Hungarian Development Bank (MFB), a credit institution fully owned by the Hungarian state, is the Hungarian institutional shareholder of the European Investment Fund.

The Hungarian Development Bank from April 2017 launched a new incentive scheme for energy efficiency measures and renewable energy systems for the residential sector based on ESI funding. Hungary has €29.63 billion available from

ESIF over the period 2014-2020 (including a national contribution of €4.63 billion). €3.3 billion is allocated for financial instruments through MFB (loan, combined loan, venture capital).

There is a huge potential of energy savings in the Hungarian residential sector which includes 4.4 million properties; 97% are privately owned and 63% were built before 1980.

It is expected that approximately 920,000 households will carry out energy refurbishment over the next five years. This will require a huge budget and financing schemes based on long-term maturity, due to the long payback time of some investment categories.

The new credit programme (long-term loans – refundable) is targeted against private individuals and condominiums/housing cooperatives (max 25% of funds). It has 0% interest and loan amounts of up to €33,000. The loans are long term, based with a maturity time of up to 20 years. MFB undertakes the risk of the loans without any guarantee.

Mr Szabo stressed that to reach customers you should behave as a retailer and spend money on advertising. MFB has credit institution partners and 642 MFB points all over Hungary. The MFB points (financial intermediaries) can be considered as the largest retail branch network in Hungary.

Up to 23 January 2018, MFB had received 1,959 applications totalling a project sum of €29 million. €19 million has been already approved with an average maturity of 13.5 years. 45% of the investments are for improving building envelopes, 29% for RES (solar energy systems and heat pumps) and 20% for furnace updating.

[Link to presentation](#)

Renovating multifamily buildings through energy performance contracting in Latvia

Nicholas Stancioff, Chairman of the Board, Latvian Baltic Energy Efficiency Facility



In Latvia there is 50 million square metres and 90% doesn't meet current building regulations. To meet the EU 2030 target an investment of €12 billion is needed.

Half of the Latvian housing stock is in danger over the next 20 years due to a persistent lack of maintenance and investment. The solution to this is to use proceeds from energy savings to finance large-scale deep renovation. This will create better homes in terms of better comfort, better health, safety, increased value etc.

Mr Stancioff stressed that the problem is not energy efficiency – residents don't understand this and particularly people with energy poverty do not possess the required knowledge. People want better homes.

The EU-funded SUNShINE project was designed and is executed by a multidisciplinary team which includes investors from several EU countries who want to address a serious housing issue in Eastern Europe, namely that multifamily buildings built during the Soviet

era are deteriorating due to wear and tear, climatic conditions and a lack of funding for renovation.

Their Dutch member company, F3, created the [Latvian Baltic Energy Efficiency Facility \(LABEEF\)](#) to refinance the long-term investments necessary in multifamily building renovation.

LABEEF purchases receivables of Energy Performance Contracting (EPC) from service companies to scale the EPC market. Additionally, thanks to the SUNSHINE project, LABEEF has developed guidelines and an online platform to process proprietary standardised contracts and transparent monitoring.

The focus of LABEEF has been in derisking projects by proper identification of both risks and sources of risks, allocating risk to the stakeholder best able to control it. As a result, LABEEF purchases contracts from builders (the execution risk belongs to them) once the works have been completed according to the LABEEF contracts and guidelines.

Both public and private investors including the EBRD have invested in LABEEF.

[Link to presentation](#)

The Green Homes and Mortgage Initiative in Romania

Steven Borncamp, Founding President, Lead Author - Green Mortgage Programme, Romania Green Building Council, and Eliza Gheorge, Manager Private Individual Customers Value Proposition, Raiffeisen Bank



Romania Green Building Council (RoGBC) is a non-profit, non-political association of businesses and other organisations. They consider themselves as an umbrella organisation and as a leading organisation promoting environmental responsibility and energy efficiency in the design, construction, operation and deconstruction of Romania's buildings.

RoGBC has co-developed with Raiffeisen Bank a green mortgage programme based on an innovative green homes certification to assess and recognise top-performing residential projects utilising sustainable construction principles.

The preferential financing allows the project developer to invest early in essential green design and other solutions and rewards the homeowner with a better-quality home and a lower monthly total cost of ownership. The green mortgage applies only for buildings certified by RoGBC within the Green Homes programme. The green mortgage provides discounted mortgage pricing available to suitably qualified prospective home-buyers

interested in buying a home or apartment subject to guidelines established by the RoGBC related to superior energy efficiency and environmental considerations. There are currently 19 projects including 5,850 apartments or villas certified or in process.

Mr Borncamp stressed that people want nice homes with good comfort rather than energy efficiency. In this respect Romania is underfinanced. Fear of debt often leads homeowners to under-invest in the design and construction process and this results in homes that are costlier to heat and cool, and require more maintenance and more frequent renovations. Further, they are subject to reduced long-term asset values relative to green homes.

The most cost-effective moment to invest in energy efficiency and other green features of a home is at the earliest moments of its initial design and creation; it is more costly and problematic to improve after the initial construction is complete.

Mr Borncamp stressed that responsible mortgage finances enable sustainable construction. A study comparing default risks in energy efficient and green homes to standard homes a 32% reduction in mortgage default risk and an 8% higher asset value was found in the green homes.

Banks need to be engaged from an underwriting and risk reduction perspective and awareness of total monthly cost for the home buyer is critical (be aware of the costs of living in a house).

[Link to presentation](#)



Ms Gheorge stated sustainability as a core business of **Raiffeisen Bank** and not only related to CSR. The bank's sustainability strategy is based on four pillars: responsible financing, workplace, society and environment. They have two main categories of projects: sustainable projects – Eco Waste (€2.9 million in 2017), and sustainable real estate projects – €96 million for commercial and office buildings, and €74 million for residential projects.

They hope more residential projects will appear; there is already a good appetite for projects in commercial buildings.

As to the green mortgage scheme the reduced interest rate is a sensitive issue for consumers. A standard loan is offered at an interest of 5.5% for the first seven years and 4.75% for a mortgage loan. For loans based on more than seven years' maturity it is 5.35% versus 4.6%.

She further showed figures indicating a higher sales price per m2 for green homes qualified apartments compared to EPC "A" or EPC "B" apartments.

Reaction from panel of stakeholders

Mihai Mereuta, President, Liga Habitat



Mr Mereuta called for more participation from the end-user side. Homeowners do not have enough influence in the operational programmes when selecting contractors, materials etc. and are not sufficiently heard by the public authorities. Local authorities are wrongly defined as beneficiaries of thermal rehabilitation. Owners/owners' associations must be the ones who receive the funds and those who decide on the contractor.

He further mentioned that the thermal rehabilitation programme has been applied in a general context in which the rights and obligations of the owners' associations as beneficiaries of the works are little known. Associations do not have qualified staff to keep track of all stages and can be easily misinformed about the quality and durability of the work being done. Associations should receive special assistance and should be represented in the relationship with third parties.

Municipalities and regions should have plans based on needs assessments, including inventories of all their buildings and their energy costs. Municipalities and regions should also prioritise buildings with the highest potential for energy savings.

Mr Mereuta also mentioned energy poverty as an important aspect to consider, but this is to some extent hindered by different definitions of poverty.

Ionut Trinca, Counsellor, Ministry of Regional Development, Public Administration and European Funds, Romania



Mr Trinca emphasised the need to create a market with the right mix of loans/financing instruments and grants. Attracting private investors and financing institutions is important but they cannot function on their own. We need both grants and loans. In Romania we did not develop innovative funding sufficiently in relation to the significant amounts available so there is still a long way to go to bridge projects and private financing.

To create better projects attractive for financial institutions further technical assistance is needed at various levels, including technical assistance A to house owner associations.

Alexander Hadzhiivanov, Associate Director, Green Building Investments, Energy Efficiency & Climate Change, EBRD



Mr Hadzhiivanov stated that the EBRD can do more and better in the residential sector. EBRD has launched many products with mixed success, but there is no silver bullet. Sometimes we don't speak the same language as the client. Banks are often driven by short-term development perspectives rather than long-term perspectives, which is important in relation to energy efficiency measures.

The lessons learned is the same as for the Hungarian Development Bank. Also, within the GEF programme, retailing and distribution channels are important to reach out to projects as well as user-friendly interfaces. Technical assistance is much needed to identify, develop, document and implement projects of the required quality.

Comments from participants

It was questioned why Romania so far has been unable to attract financing for project development assistance from ELENA and the H2020 PDA. Local energy agencies have experienced big difficulties in trying to promote and support local authorities to launch a strong energy efficiency project using EU funding, private financing or dedicated loans for energy efficiency projects. This is a reality which needs to be recognised and it needs to be tackled by adequate measures.

Energy poverty was mentioned to be quite high and participants called for support from the national authorities on this point. The Ministry of Energy stated that they are concerned about this matter.

PARALLEL SESSION A: MAKING ENERGY EFFICIENCY INVESTIBLE

Chaired by Diana Barglazan, Policy Officer, Directorate-General for Energy, European Commission



Structuring investor-ready energy efficiency projects

Investor Confidence Project – ICP

Jorge Rodrigues de Almeida, ICP Europe Director, RdA – Climate Solutions (Portugal)



Jorge Rodrigues de Almeida spoke on the need to improve the bankability of energy efficiency projects. The market needs to build a jigsaw of energy efficient finance opportunities. There are a few steps to follow to set this up: provide finance; develop a pipeline of quality projects; build capacity on the developments and investment side; and standardise. This last point seems to be the most difficult, currently investors have a hard time

assessing projects submitted in different formats. This leads to more risks, uncertainty and difficulty in aggregating projects.

[ICP](#) developed a quality label that projects can apply for to prove they follow the best standards on the market. This label signals that the project is ready for investment. ICP also put together a network of investors with interests in different market sectors such as buildings, industry, district energy systems etc.

After developing this certification scheme some lessons were learnt: it's really complicated for investors to analyse projects; early engagement is important; it's important to gather all useful information in one place.

ICP supports the market by offering this certification scheme, by connecting investors, providing training and making cities and projects more attractive to possible investors.

[Link to presentation](#)

The EEFIG Underwriting Toolkit and the De-Risking EE Platform (DEEP)

Monica Ardeleanu, Executive Director, Romania Green Building Council



The [EEFIG](#), an expert group set-up by the European Commission and UNEP Finance Initiative, identifies a "very strong economic, social and competitive rationale for the up-scaling of energy efficiency investments in buildings and industry in the EU".

Monica Ardeleanu presented one of the main results of the EEFIG group, namely the [Underwriting Toolkit](#). It provides information aimed specifically at the

different units and individuals within financial institutions whose task is to evaluate, assess, approve and process energy efficiency transactions. This guide attempts to develop a standardised approach, and discusses the issue of performance risk, which is critical as a greater understanding of performance risk will allow it to be managed and priced appropriately. Further, it aims to provide a common language, which can be used by both the financial industry and the primarily technically led energy efficiency industry.

Another key outcome of the EEFIG work was the open source database on energy efficiency projects across Europe (the [DEEP database](#)), gathering real numbers from real projects with new additions all the time. DEEP will contain details of over 10,000 individual energy efficiency projects across buildings and industry. Anyone can use it, but it is meant for investors. There are no projects from Romania in the database, but there is a call to become a data provider or simply a user.

[Link to presentation](#)

EBRD Green Economy Financing Facility (GEFF)

in cooperation with Banca Transilvania and UniCredit Bank

Mark Velody, Project Manager, Green Economy Finance Facility, EBRD / Tractebel Engineering (Romania)



Mark Velody presented the Green Economy Financing Facility (GEFF) which is a financing initiative running in several countries including Romania, where it's been present for 10 years. It combines technical knowledge with finance to help clients invest in high-performing technologies. So far almost €4 billion has been used from this fund.

The EBRD created a credit line and lends in multiples of €5 million to local institutions.

Those loans are used for sub-lending to local companies or households to carry out projects related to energy efficiency. On top, GEFF provides training, marketing, gives incentives and has a verification mechanism in place. This edition of the GEFF includes a residential programme for Romania which focuses on energy efficient homes, home renovation projects, water saving and small-scale renewables.

GEFF above all tries to avoid bureaucracy and have a smooth and easy process of evaluating and accepting project proposals.

The latest GEFF, launched in Romania in 2017, includes a €100 million EBRD financing framework for energy efficiency and small-scale renewable energy investments in the residential sector. This is available through the local participating financial institutions Banca Transilvania and UniCredit Bank.

GEFF is a flexible facility. The local participating banks may choose to use GEFF to finance household customers or business customers, meaning **household credits** for high energy performance equipment and materials; **home mortgages** to buy low-energy new houses and apartments; **renovation financing** to make older homes more energy efficient; **business loans** to help companies who supply energy efficiency or renewable energy products or services to households.

[Link to presentation](#)

Robert Szilagyi, Product Manager, Banca Transilvania



Banca Transilvania has two ongoing projects with GEF. Mr Szilagyi emphasised that it's not enough to have good products, banks also need to be proactive in looking for the right clients. Banks must auto-educate to identify beneficiaries with the right profile and which are eligible for the products.

Sorin Dragulin, Products & Segments Director, UniCredit Bank



The role of the bank is to make the various financing products available to consumers. The end users don't care about what's behind the product, as they are more interested in the benefits they can reap. It's important that it's a win-win situation for everyone, bank and consumer alike.

Banks want to grow with customers that are interested in energy efficiency. It's a learning curve even for banks.

Mr Dragulin concluded that they intend to finance this kind of project even without the support of GEF. UniCredit will also launch a green mortgage product soon.

PARALLEL SESSION B: ENERGY RENOVATION OF PUBLIC BUILDINGS AND THE ROLE OF ESCOS

Chaired by Adrien Bullier, Senior Project Adviser, Executive Agency for Small and Medium-sized Enterprises (EASME), European Commission



Legal framework for energy performance contracting (EPC) in Portugal

Gorete Soares, Coordinator of Energy Efficiency in Public Administration Unit, ADENE (Portugal)



Ms Soares started by addressing the question of how EPCs were created in Portugal. It all started with the programme called ECO.AP in 2011 (ECO Innovation Action Plan). In order to implement the programme some regulations have been developed: the legal framework for energy performance contracts (EPC) in the public sector, in coordination with the remaining procedures for public contracting; an ESCO qualification system; implementation

agreements between the Ministries to subscribe the ECO.AP programme publishing of a tender specification model to be used by the public sector in tenders for energy performance contracts; clarifying the application of ECO.AP to the regional and local public administration.

New approaches are being discussed now, which concern all the sectors, industry, private/public buildings, etc. The ECO.AP programme aims at promoting energy efficiency in public administration; promoting the development of the ESCO market (private and public); development of EPCs in the buildings and equipment with higher energy consumption (or inefficiency); contributing to the goal established in NEEAP of reducing

energy consumption in the public administration sector by 30% by 2020. In the scope of this programme, local management bodies have been created, representing around 600 technicians. A complementary tool has also been created to help implement the programme: a barometer. The objective is to evaluate the development of the energy efficiency in public administration, not only in the buildings (street lighting, etc).

The development of the ESCO market is supported by an ESCO qualification system. Only qualified ESCOs can promote projects within the public sector. To qualify, they must meet some requirements both technical and financial (see the presentation for further details). So far 66 ESCOs are qualified in Portugal but only 10-15% are active.

Please refer to the presentation for additional details about the procedures and project examples.

[Link to presentation](#)

Regional one-stop-shop centre for the renovation of public buildings in Rhodope region (Bulgaria)

Ivanka Pandelieva-Dimova, Project Manager, Sofia Energy Centre (Bulgaria)



The Rhodoshop took its source in the CITYnvest project. This H2020 project aimed at promoting innovative financing to boost investment in energy efficiency projects through summarising the existing financial models across Europe and providing tailor-made solutions for the three participating pilot regions – the Belgian province of Liege, the Bulgarian Rhodope region and the Spanish region of Murcia.

The RENOWATT project served as an example model of innovative financing. RENOWATT is a one-stop-shop for public building retrofit created by the province of Liege through the regional development agency (GRE-Liege). It acts as a central procurement agency on behalf of Liege municipalities in retrofitting of public buildings. Its main functions concern marketing and communication, facilitation and support for municipalities (including energy audits, investment projects development, search for funding options, launch of public tenders for construction works), and project bundling to gain critical size, etc.

In the frame of the CITYnvest contract, many activities took place in Rhodope, such as investigation of current status and perspectives of energy efficiency projects (incl. renewable energy systems in buildings); elaboration of an action plan considering the inventory of models and based on replicating the RENOWATT model (including funding options); meetings and consultations with local authorities on the RENOWATT model (also attended by GRE-Liege representatives) to get them on board; decisions of municipal councils on the creation of Rhodope one-stop-shop for energy efficiency projects, adapting the RENOWATT model to local conditions.

The Rhodoshop is a joint undertaking of six pioneering municipalities – Smolyan, Banite, Chepelare, Devin, Nedelino and Zlatograd, also collaborating with some other key actors such as the Association of Rhodope Municipalities (ARM). The Rhodoshop host organisation is the Sofia Energy Centre – providing management and coordination support to Rhodoshop. GRE-Liege is a subcontractor for capacity building of Rhodoshop staff on one-stop-shop operation and ongoing support during Rhodoshop operation phase.

The Rhodoshop received funding from H2020 Call PDA, 2016; while its main sectors of activity are public buildings and street lighting. It hired three full-time employees and one part-time; all extensively trained in legal, economic and technical aspects. The one-stop-shop also counts on external support through subcontracting.

Essentially, the one-stop-shop helps Rhodope municipalities in securing funding while considering organisational, administrative, legal and financial aspects. It also assists the local authorities in the region in building technical, economic, legal and administrative expertise for a wider implementation of energy efficiency in small rural municipalities; and bridges the gap between project owners and financiers by providing bankable investment projects ready to be financed; and overcomes barriers of small project size through bundling.

[Link to presentation](#)

The Bulgarian Energy Efficiency Fund and the role of energy service companies

Asen Charliyski, Deputy Executive Director, Bulgarian Energy Efficiency and Renewable Sources Fund



The Energy Efficiency and Renewable Sources Fund (EERSF) was established through the Energy Efficiency Act adopted by the Bulgarian Parliament in February 2004. The initial capitalisation of EERSF is entirely with grant funds, its major donors being the Global Environment Facility through the International Bank for Reconstruction and Development (the World Bank) – US\$10 million; the government of Austria – €1.5 million; the

government of Bulgaria – €1.5 million; and several private Bulgarian companies.

EERSF has the combined capacity of a lending institution, a credit guarantee facility and a consulting company. It provides technical assistance to Bulgarian enterprises, municipalities and private individuals in developing energy efficiency investment projects and then assists their financing, co-financing or plays the role of guarantor in front of other financing institutions.

The underlying principle of EERSF's operations is a public-private partnership. The Fund

pursues an agenda fully supported by the government of Bulgaria, but it is structured as an independent legal entity, separate from any governmental, municipal and private agency or institution.

Please refer to the slides available for the technical details about the financing, the technical expertise and the procedures. Project examples can also be found.

[Link to presentation](#)

Developing the ESCO market in Romania

Carmen Pavel, Vice President, Romanian ESCOs Companies Association (ESCOROM)



The initiative belongs to a group of motivated people who wanted to overcome the barriers met by ESCO companies.

Born in 2015, the initiative is private and independent from the Romanian government or the EU in terms of funding. So far, 10 members can be counted: seven companies active in the ESCO industry and three independent energy efficiency consultants.

The initiative tries to maintain a strong communication with national bodies (National Regulatory Energy Authority, Energy Commission of the Management Authority of the Large Infrastructure Operational Programme, Chamber of Deputies – Committee for Industries and Services etc.) having as its main goal the removal of legal barriers hampering the activity of ESCOs in the Romanian public sector, commercial banks, financing institutions etc. It also created communication channels with similar EU organisations on specific issues such as assessment of the impact of the Eurostat Guidance Note from 07/08/2015 on national EPC market; or the benchmark of ESCOs based on commitment to hold to clear values and principles.

ESCOROM also works on managing awareness and capacity building campaigns (EDUESCO project) on EPCs dedicated to public authorities, specifically on development and implementation of Energy Efficiency Action Plans and capacity of ESCOROM members to provide tailored advice in design and implementation of energy efficiency improvement programmes.

Unfortunately, despite some important milestones achieved, the signals we have received show that interest in ESCOs is low for some bodies.

However, some conclusions can be drawn from this experience. At the EU level, ESCOROM supports the initiative of the European Commission saying that “The role of EPC must increase, in particular in the public sector” (Clean Energy for All Europeans). At the Romanian level, though, ESCOROM deplores the very low interest of decision-makers

in the development of ESCOs and related industries.

They insist that the Romanian ESCOs are prepared to deliver turnkey projects and look forward to removal of barriers – they are able to prepare EPCs to link the performance to the payment and to take over the project-related risks; organise the ESCO activity inside companies as departments exclusively dedicated to providing energy efficiency services; prepare energy audits, provide consultancy services and energy management services etc.; perform complex projects dealing with modernisation and optimisation of the heating, ventilation and air conditioning (HVAC), including the renewal of energy equipment and of the electrical (including lighting retrofit) systems, as well as with the energy supply (renewable sources and cogeneration) under existing legal frameworks; carry out active marketing activities.

[Link to presentation](#)

PARALLEL SESSION C: ENERGY EFFICIENCY IN THE INDUSTRY AND SME SECTORS

Chaired by Zoltan Nagy-Bege, Vice President, Romanian Energy Regulatory Authority (ANRE)



Lending to industrial energy efficiency projects

Mihai-Marius Voronca, Executive Director, Romanian Energy Efficiency Fund



The Romanian Energy Efficiency Fund (FREE) is providing commercial financing of investment projects aiming to support the rational use of energy and the use of renewable energy sources. The funds for financing are constituted by an initial US\$10 million grant provided by GEF to Romania. The Fund is revolving, and the interest payments and principal repayments are used for new loans.

As to eligibility criteria the fund requires a co-financing: up to US\$1 million and a project sponsor share of minimum 20% of total investment size. There should be a short payback time (less than 4 -5 year) and at least half of the financial benefits should come from energy savings.

The fund doesn't subsidise loans for any borrowers. It offers loans with floating interest rates plus commission. Loans are made on a commercial basis to creditworthy customers.

Project financial support may include debt financing, equipment leasing, and payment for

services, and/or various combinations of these. The Fund is flexible both in terms of product mix and terms, meaning it can offer the financial products which the evolving market demands.

The Fund uses its own expertise in assessing the ‘capability’ of the project to generate enough financial benefits from energy savings, with the main purpose to provide the project sponsor with the comfort that the investment generates enough income to easily cover its debt service.

The financing gap is filled by originating transactions, by combining expertise in energy efficiency analysis, structured finance and credit analysis, and by attracting commercial co-financing.

Mr. Voronca stressed that the fund tries to help its clients as much as possible and that communication with the client is very important. Each case is subject to due diligence to identify any co-financing alternatives and to assess various risks (including the financial standing of the clients).

Commercial banks have co-financed 39% of the project financing, the fund itself 39%.

According to the project portfolio 1 February 2018, the fund has entered into 38 financing agreements (US\$21 million), while 168 projects have applied for funding.

[Link to presentation](#)

Energy efficiency investment projects in the Romanian industry and SME sectors

Razvan Grecu – President, Romanian Association for the Promotion of Energy Efficiency (ARPEE)



Mr Razvan Grecu initiated the presentation with some facts about energy demand trends in EU and Romania. He noticed similar mid-term trends in the primary and final energy demand in EU and Romania (please refer to slides).

There has been a significant increase of the gross value added of industry in national accounts in Central and Eastern Europe in the last 15 years, and at the same time also a large improvement of energy efficiency by the industrial sector in the region. One of the biggest growths is in Romania and the gain in overall energy efficiency is not only related to the reduction of the number of big industries. Significant efficiency gains have been recorded in the last 15 years in almost all sectors, offsetting the increase of economic activity.

He mentioned some weak and strong points related to large industry and SMEs respectively. Large industry has superior investment power and credit worthiness and easier access to efficient technologies and technical competences. Market competition forces large companies to stay cost competitive and provides some incentives for energy efficiency. Energy efficiency measures with a short payback time (low-hanging fruits) are already implemented but current market conditions (competitive pressure) may delay further measures.

As to SMEs there is an increasing concern regarding accessibility of energy efficiency financing for SMEs which has created some momentum for improvement. Furthermore, the increase in retail prices have made them more aware about the benefits of energy efficiency. However, SMEs typically lack financial power to finance the equity part of investments and have limited internal competences to carry out energy efficiency projects. He further mentioned the various sizes of SMEs as a challenge in assisting SMEs (various needs and competences).

Overall Mr Grecu concluded that Romania remains a country with a significant energy efficiency potential ahead in industry and SMEs. However, there are very few instruments to finance energy efficiency in industry and SMEs.

Additional instruments must be put in place including instruments to reduce investment risks. Public authorities must play a more active role, including through fiscal policies, in penetration of new and innovative financing schemes and improved education. Knowledge of stakeholders on energy efficiency will be key (information campaigns, roundtables etc.).

[Link to presentation](#)

Bank experience on industrial energy efficiency investments

Valentina Croiala, Branch Manager, and Marius Nadolu, Head of Treasury Department, ProCredit Bank, Bucharest



ProCredit Bank is a profitable, development-oriented commercial banking group for SMEs with a focus on South Eastern Europe and Eastern Europe.

It has its headquarters in Frankfurt and is supervised by the German Federal Financial Supervisory Authority (BaFin) and the Deutsche Bundesbank.

The bank has a focus on formal innovative and growing SMEs, including promoting investments in environmentally friendly technologies and businesses. The focus is on

energy-intensive sectors of the economy, and the most common types of investments.

The bank has created a green finance scheme for SMEs (100% financing), which is meant for investments in energy efficiency and in technologies that produce renewable energy, as well as for activities that enforce environmental measures.

These loans provide several advantages: long funding periods of up to 15 years; convenient interest rates for investment projects/guarantees offered by EU funds (InnovFin or SME Initiative); standard grace period of up to 18 months.

The bank has an outstanding green loan portfolio (€28.2 million as of December 2017). Almost half (48%) of the portfolio comes from Innovfin, 14% from EIF Jeremie and 38% from own funds. Green finance was launched in November 2014.



Five Romanian banks have signed up to a SME Initiative in Romania (June 2017), to provide new financing for SMEs across the country. The SME Initiative is managed by the EIB Group (European Investment Bank and European Investment Fund), the Government of Romania and the European Commission.

The agreements with the five banks aim to facilitate access to finance for Romanian SMEs by providing a 60% guarantee on each loan and by lowering the interest rates charged by banks. These transactions with Raiffeisen Bank, ProCredit Bank Romania, Banca Comerciala Romana, Banca Transilvania and BancPost are expected to benefit around 3,700 SMEs and start-ups in need of finance.

The SME Initiative entails an innovative change in the use of ESIFs combining the latter with EU central budget (resources from the Horizon 2020 Programme) and EIB Group funds.

[Link to presentation](#)

Company experience on industrial energy efficiency investments

Marian Cilianu, Operations Director Primary Aluminium, ALRO



ALRO is a privately owned company, the largest primary aluminium smelter in Eastern Europe. ALRO is part of the VIMETCO Group.

The company has since 2004 invested in a series of projects to increase energy efficiency and become more competitive in the market (US\$300 million dollars invested), including LEDs, various measures lowering consumption, energy efficient production facilities and

upgraded processing lines. During 2017, the company launched over 20 investment projects, totalling nearly US\$41 million, to increase operational efficiency and high value-added products.

From an operational point of view, the new equipment will support ALRO's programme to expand the range of products with high value added, specific to the automotive and aerospace industries, but will also have a direct impact on specific consumption, increasing the company's energy efficiency. Moreover, ALRO will increase the quantities of recycled metal, which will have positive effects on the environment.

The industry has a "Green Factory" concept that aims at using state-of-the-art green technologies that will enable the company to produce high added-value aluminium products. In addition, they will contribute to meeting ALRO's close to zero-waste and zero emissions targets

ALRO cooperated with EBRD in 2010. Following this collaboration, an energy audit was performed in which 16 projects impacting energy efficiency and another three projects impacting the quality of product were identified.

Prior to the improvement of investments each project is analysed in detail and a comprehensive file for each project is prepared, including the project objectives and benefits, necessary capital expenditures broken down by cost elements and time, execution schedule, KPI for each investment etc.

The entire investment programme is managed by an integrated project team and followed up by means of dedicated software tools. Since 2015 according to the EU Energy Efficiency Directive and Romanian legislation for Energy Efficiency ALRO S.A. is audited periodically by an independent auditor certified by the Romanian Energy Regulatory Authority (ANRE).

Specific consumption of natural gas has decreased fivefold since 2003 and the energy consumption decreased more than two times in the same period.

[Link to presentation](#)

CLOSING PLENARY SESSION

Chaired by Gabriel Friptu, State of Secretary, Ministry of Regional Development, Public Administration and European Funds, Romania

Short reports from parallel sessions by Chairs

Each of the session moderators were asked to provide three key messages from their respective sessions – these are given below.

Session A: Making energy efficiency investible



Ms. Diana Barglazan, European Commission, stated that considerable time was dedicated to discussing the complexity of the residential sector. One of the main problems is the lack of standards in project development and documents, making it difficult for banks and investors to trust that the energy savings generated will be a reliable source of revenue. Two of the projects presented within the session dealt with standardisation.

The Investor Confidence Project (**ICP**) provided a framework for standardising how energy efficiency projects are developed, documented and measured. The EEFIG Underwriting Toolkit assists financial institutions by providing a common framework for evaluating energy efficiency investments and analysing the risks.

The second point discussed was the need to establish a closer connection between all the relevant stakeholders working in the field, enabling all relevant aspects of a project to be addressed through its development and implementation. It is important to involve the entire value chain in designing and implementing financing instruments.

A third point discussed was the need for more education and training in the energy efficiency field. In this context energy efficiency should be introduced as a lifestyle, a choice for healthy living. Consumers or clients should be proactively engaged by banks (reaching out more proactively).

Session B: Energy renovation of public buildings and the role of ESCOs



Mr Adrien Bullier, EASME, highlighted four key points coming out from the session.

The first was the importance of a legal framework. Here two key points were discussed: because we are talking about public buildings public procurement is essential. Energy Performance Contract projects are not usual projects: they need to be procured in a specific way, and as such procedures for procurement should

be adapted. The other legal point concerned accounting: does it go on or off-balance sheet? We were in a grey zone for many years; we had a clarification from EUROSTAT in September, which is more positive for EPC than the previous one, but we are still waiting for guidance, and that will still need to be transposed into national regulation.

The second point discussed was the need to identify and develop projects, which requires a lot of effort and money. Two projects presented how they are doing this in Portugal and Bulgaria with the help of project development facilities. ELENA and the money managed under H2020 for PDA are available to help on this. The two projects presented within the session are focusing on “one-stop-shops” for smart finance in smart buildings. Basically, local authorities don’t have the capacity to develop the projects, they need support, and this is what an entity on national or regional level needs to be doing for them.

The third thing discussed was that ESCOs need to access finance – they are not banks, they need to go to the bank to get money. The Bulgarian Energy Efficiency Fund is clearly a good role model because they are providing loans and guarantees for ESCOs. They are also refinancing ESCOs. Once the ESCO has a running contract they give them cash against the future receivables of the project, enabling the ESCO to develop further projects.

The fourth point discussed was more focused on the Romanian situation and on the point of view of the Romanian ESCOs, who feel that they are lagging behind, particularly in terms of the legal framework, which is the first stepping stone to develop the market for ESCOs. There is clearly, from the presenter’s point of view, a call for public authorities to develop the right legal framework.

Session C: Energy efficiency in the industrial and SME sectors



Mr Zoltan Nagy-Bege, ANRE, highlighted the key points coming out from the four presentations within the session.

The **Romanian Energy Efficiency Fund (FREE)** was highlighted as a good example of assisting the industrial sector in financing projects on a commercial basis. It has funded 38 projects with an average payback time of 3.6 years.

Many problems are to be overcome (referring to the presentation from **ARPEE**). Some energy efficiency gains have been achieved but the release of the overall large potential will require better access to financing through new financing schemes and new instruments to decrease investment risks. This should be accomplished by improved education and knowledge of stakeholders on energy efficiency. Further, public authorities must play a more active role in establishing financing schemes i.e. through fiscal policies. Energy efficiency projects must be treated differently in large industries and SMEs as well as among SMEs that vary in sizes (various needs and competences).

The activities of **ProCredit Bank** underline the increasing trend among some SMEs towards focusing on energy efficiency, and the bank is successfully pursuing this potential through its green finance loan portfolio.

ALRO is a good example of an industrial company that not only focuses on direct energy benefits but also on non-energy benefits derived from energy efficiency projects. Despite low energy prices the company sees a clear benefit in investing in energy efficiency which also leads to improved productivity. In the case of ALRO this has over the years led to a significant improvement in the company's competitiveness in the market.

Reaction by panel of stakeholders

Cristian Romeo Erbasu, President, Construction Companies Employers Federation



In the private building sector, we can clearly see an increased investment portfolio over the past years. There is a clear interest for investments and contractors which are now also acting as real estate developers. Builders and contractors have gradually adapted to market requirements. However, the market is not sufficiently prepared to move to optional areas like energy efficiency.

Public private partnerships e.g. with ESCOs are not working well and not yet supported by a sufficient legal framework.

As to the consumers they are more willing to spend money on their inside interior rather than their exterior. It is also worth mentioning that we have an aging population with a low appetite for long-term thinking. This is a problem in relation to investments with a long payback period.

Fluctuation of market prices confuses both investors and donors. The state needs to get better involved and invest more. Investors need stability. We need to organise the cooperation among all actors better, the current situation is chaotic.

Florin Dănescu, Executive President, Romanian Association of Banks (RAB)



Mr Dănescu referred to his long working experience within the banking sector where he has continuously experienced people and entities criticising banks. He stated that the banks are only doing their job, looking into credibility. We need to cooperate and understand each other better. We call for cooperation to enhance financing energy efficiency, a better communication is one of the keys.

As mentioned by Mr Erbasu, there is a missing framework for public-private partnership (PPP) and the banking sector would like to participate in the development of this framework and create win-win situations for the public and private sector. The framework should empower the private sector to improve efficiency and quality of service.

He stressed the need to standardise the market, enabling banks to analyse figures from energy efficiency projects properly. Instruments are needed to ensure that information and figures are presented in the right way.

As to the important SME sector, Mr Dănescu mentioned that there are 600,000 SMEs in total and their overall assessment is that only 15% of these can meet the criteria of banks. There is a need to create a market for all SMEs, not only the 15%. The SME debate should start from the bottom.

To create better projects, we need to educate both consumers and suppliers. To reach the full potential a serious discussion and cooperation among all partners is needed.

Grigoris Krallis, Senior Sector Engineer, Energy Department, EIB



EIB has been in the region since 2009 implementing several projects in the energy efficiency sector. It is important to highlight these as well as what EIB could do additionally in the region – partly because the morning session mentioned that the EIB's energy efficiency investments in the region are close to zero.

In Romania, for example, EIB has already implemented thermal rehabilitation projects of residential buildings through the municipalities. Around €500 million has already been invested. This has been through a straightforward investment loan through a municipality. However, other EIB products could potentially apply in the region as well. For example, framework loans through intermediary lending. With intermediary lending EIB can lend to financial intermediaries including commercial banks which can then lend to their clients, not only private individuals but also SMEs and industry and other sectors. One of the products is the project finance for energy efficiency, which is a type of a framework loan through which EIB lends to commercial banks but at the same time the loan from the EIB is complemented by a guarantee provided by the Commission.

It is also worth mentioning the Technical Assistance programmes for banks, public authorities and municipalities. Specific TA facilities can help banks to market the products and help them comply with the EIB's individual requirements. ELENA which was mentioned several times during the day is a very important tool to help investors targeting energy efficiency investments.

Mr Krallis also mentioned the European Investment Fund (EIF), which is part of the EIB Group. The EIF focuses on establishing a sustainable venture capital ecosystem in Europe, supporting innovation and entrepreneurship. The EIF works with venture capital funds (acting as intermediaries) that invest into innovative high-tech SMEs in their early and growth phases.

In addition, the European Commission and EIB have established the European Investment Advisory Hub. The Hub aims to strengthen Europe's investment and business environment and offers a single access point to a 360 degree offer of advisory and technical assistance services.

Radu Dudau, Director, Energy Policy Group



Energy efficiency in Romania has substantially improved since the 2000s, and not only in context of the financial collapse, but also due to effective measures and programmes introduced by the energy sector. PRIMES modelling done in 2016 shows a 30% decrease in energy intensity by 2030 but still 25% above the European average.

There is still a big need for improving the various programmes. Public policies need to be linked strategically to energy including mitigating energy poverty. It is also important to consider how to involve citizens as stakeholders in the process. They need to be respected more seriously – and be provided with more information on smart energy etc.

Further, it should be considered that there is also a big need in rural areas, in which 50% of the population lives.

The debate in Romania continuously discusses how the state can support/motivate/trigger energy efficiency investment. Stakeholders continuously raise the need for a better framework.

We see some development, banks have credit lines for energy efficiency and there is some progress in the energy efficiency sector. It shows some level of commitment to handle the issues. Further the education process as referred to has already started.

However, the energy efficiency market is stuck and needs more favourable conditions.

It would be good to have policies efficiently supporting energy efficiency. We need to build further on the commitment already established and to think more strategically. We need to get organised, ministries should go together and elaborate a joint strategy.

Closing remarks

Tudor Constantinescu, Principal Adviser to the Director General for Energy, European Commission



On a positive note we do understand the problems we have, the obstacles, the things that must be done.

We have seen what people do in other countries and how they have found solutions.

The energy transition is complex, but important steps have been taken both in Romania and in other countries. Energy efficiency is seen as a solution and we need to appreciate more positively the first steps

There are still major efforts to be made, the potential is particularly high.

CO₂ emissions, growing jobs, economic growth are also important to take into consideration as driving factors.

We need a roundtable to unblock and overcome the obstacles and jointly develop good solutions and projects.

Zoltan Nagy-Bege, Vice President, Romanian Energy Regulatory Authority (ANRE)



This conference shows a need to intensify cooperation and communication to revise the framework for energy efficiency in Romania properly.

Energy efficiency is key to better homes, mitigating energy poverty, economic growth and reducing CO₂ emissions. When it comes to Romania, figures show some progress regarding energy efficiency.

Let's use this as a basis to create a positive dialogue and better interaction within the energy efficiency sector.

The dialogue today is a starting point, a milestone for further action.

