Financing Energy Efficiency in Poland, Czech Republic, Slovakia and Lithuania

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Event organised in the frame of the Sustainable Energy Investment Forums funded by the Horizon 2020 programme of the European Union
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As part of the "Smart Finance for Smart Buildings" initiative, the European Commission is organising a series of “Sustainable Energy Investment 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.

Some 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 summarized and updated on the EASME webpage dedicated to energy efficiency finance.
EXECUTIVE SUMMARY

The Regional Conference, which took place on 30th November 2017, was co-organised by the European Commission, the Ministry of Energy of Poland and the National Fund for Environmental Protection and Water Management (NFOŚiGW), in partnership with UN Environment Finance Initiative (UNEP-FI).

It targeted specifically Poland, Czech Republic, Slovakia and Lithuania, as part of the series of events organised in the framework of the Sustainable Energy Investment Forums. The aim was to gather key stakeholders at a national and regional level to boost large-scale investment and financing for energy efficiency. The Forum events form a basis for a long-term cooperation and aim to provide roadmaps to improve access to sustainable energy finance in the various target countries.

128 participants were present at the conference in Warsaw and a range of different sectors were represented including the financial sector, national Governments, project developers, the renovation supply chain and local and regional authorities.

The duration of the conference was one day and included an opening and closing plenaries and the following breakout sessions:

1.1) Making energy efficiency investible;
1.2) Making Energy Performance Contracting more attractive;
2.1) Energy efficiency financing in the buildings sector; and
2.2) Energy efficiency financing in the industrial sector.

Through the presentations and discussions, the following key points emerged:

- To deliver against energy efficiency and carbon reduction targets in the coming years, the importance of addressing the energy performance of the building stock is increasing. The European Commission is putting in place new regulation to pave for such development, including financing instruments.
- This is accompanied by considerable support and advice available for projects and programmes, described in detail by projects presented during the conference. The European Commission and other institutions are seeking to bring Governments, projects and programmes together to provide opportunities for exchange of experience and capacity building. This is supplemented with national programmes and initiatives, as presented by the energy administrations in Poland, Czech Republic, Slovakia and Lithuania.
- The parallel sessions gave interesting insights and discussion on how to tackle the particular barriers and opportunities within the various sectors (public and housing sector; industry and tertiary sectors; private housing sector) with focus on the event host country Poland:
- The session on making energy efficiency investible addressed the overall challenges of bridging the financing and energy efficiency sector. This included international
efforts of developing examples and like under Smart Finance for Smart Buildings initiative the Energy Efficiency Financial Institutions Group (EEFIG),

• The session on development of the EPC/ESCO market showed a considerable interest in the current and potential future role of energy service companies, but also differences in terms of what is meant by an ESCO and the way in which they operate. It also revealed prosperous good practice of Energy Performance Contracting, but also that the concept requires more support to release its full energy saving potential.

• The session on Energy efficiency financing in the buildings sector showed ways to scale up finance for energy efficiency refurbishment of buildings. This was supplemented with presentation of initiatives and instruments to support measures in respectively public, multi-family and single-family buildings. It also showed how there in Poland is being introduced energy advisory scheme as a way to facilitate EE investment in the building sector, a development that could be stimulated via concepts like one-stop-shops.

• The session on industry/SME sector showed some of the existing initiatives in Poland, incl. the PolsEFF Program and an effort to make energy audits obligations more practical in use. It also showed international examples and how these have stimulated investments.

• The closing plenary gave reflection on the day. It included reports from the parallel sessions and final remarks of participants. Margot Pinault, representing EU Commission, made the final word stating that the event proofed a lot is happening in the field of energy efficiency finance and provide good basis for the future efforts. The intention is to opt for strengthened cooperation between the banking sector and the national funds, as the pooling of public and private finance is needed to realise the policy goals.
BACKGROUND OF EVENT

The Energy Union Framework Strategy positions energy efficiency as one of its five dimensions and states that ‘it is to be treated as an energy source in its own right’. 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 do they help the EU in turning climate *ambition* into climate *action*, they also bring a number of significant benefits for European citizens and companies in terms of environment, health, security of supply, lower energy bills, more jobs and sustainable growth.

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

The conference was convened to share best practice from its target countries and more widely from across Europe on financing energy efficiency. This included sessions on the use of private and public funds and innovative financing instruments, notably in the building and industry sectors. Speakers focused on practical experience in developing and structuring investment programmes. The event included panel discussion sessions as well as question and answer sessions for individual speakers. Summaries of these sessions are included within these event proceedings.

Copies of all presentations and recordings made at the event can be accessed at: https://ec.europa.eu/energy/en/events/financing-energy-efficiency-poland-czech-republic-slovakia-and-lithuania
PLENARY SESSION 1 – POLICY CONTEXT AND STATE OF PLAY
Session chaired by Mr Zbigniew Kamieński, Adviser, Advisers Team, National Fund for Environmental Protection and Water Management

Welcome and introduction by the host
Mr Zbigniew Kamieński, Adviser, Advisers Team, National Fund for Environmental Protection and Water Management (NFOŚiGW)

Mr. Kamieński welcomed all participants on behalf of the organisers. He said that the conference addressed the need for energy efficiency financing instruments to pave way for a low emissions economy. Especially it is important to create the public/private partnerships to gain momentum as it is realised in the policies of the EU Commission.

The conference was not to be seen a stand-alone event, but as part of a series of events to explore solutions to this society challenge. He introduced how the conference was divided into first a plenum session followed by parallel sessions on key energy efficiency financing topics and in the end a closing session. Underway would be shown practical examples and undertaken debate on the issues raised.

Mr Andrzej Piotrowski, Under Secretary of State in the Polish Ministry of Energy

Mr. Piotrowski stated that there is more complexity behind the conference subject than it might appear from simple slogans. Increase of energy efficiency is not described by a linear function so identified here potential shall be fulfilled in the most appropriate manner that does not solely include pure market rules. Factors like health but also comfort of living – that might be difficult to measure - are also to be considered.

Moreover, the entire chain of the energy system must be considered in the policy so energy efficiency is introduced from the energy production up to the procedures performed by final users. The conference can help bringing knowledge and ideas on how to optimise the use of public means like administrated by NFOŚiGW and the BGK in Poland.

EU Policies in support to Energy efficiency investments
Ms Margot Pinault, Policy Officer at Unit Energy Efficiency of the Directorate-General for Energy, European Commission

Ms. Pinault started to present EU’s goals of putting energy efficiency first, demonstrating global leadership in renewables and delivering a fair deal for consumers. There has already been achieved a de-coupling in the sense that the European GDP is continuously growing, while the primary energy consumption has fallen since year 2006.
The goal of energy efficiency is to go along developing a more flexible energy system and democratisation of energy via distributed energy away from centralised energy. A supporting policy framework is needed, not least in terms of building renovation, financing and associated digital/ICP solutions.

Building renovation is addressed in the current revision of the EPBD and EED, there is launched a Smart Finance for Buildings initiative and within digital/ICP is being developed a smart indicator for buildings.

The Smart Finance for Buildings initiative entails three pillars:

- More effective use of public funds
  Including facilitating financial instruments and EFSI blending with ESIF funds
- Assistance and aggregation
  Including supporting Project Development Assistance facilities and "One-stop-shops"
- 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 instrument per Member State or even at regional level. For instance, in Poland EU funds play a major role via allocation of 2 billion EUR in Poland, but this funding should be multiplied by 20 via leverage. As last part of the presentation Ms. Pinault made aware of relevant calls under H2020 as well as the ELENA programme, managed by the EIB and the European Commission, that can provide support to making specific sustainable energy projects bankable.

**Mobilisation of the financial sector on energy efficiency**

**Mr Martin Schoenberg, Energy Efficiency Project Coordinator UNEP FI**

Energy efficiency investment is driven by its value premium. Nevertheless, further action is required to upscale investment levels. A Business As Usual (BAU) scenario until year 2035 shows that a big share of the energy efficiency potential remains untapped, especially in the building sector, which calls for putting in place appropriate drivers. On the positive side can be seen a large growing global EE investment market; meaning that energy efficiency improvement is gaining pace despite falling oil prices. According to the IEA, global annual EE investment needs to increase by a factor of 8 to meet a 2 degrees pathway.

To mobilise the financial sector the G20 Energy Efficiency Investment Toolkit provides a collaborative architecture for policy-makers and FI with a view to bridge the public and private finance in line with the policy goals. This entails strengthening the collaboration between policymakers, private finance institutions and development banks based on voluntary investment principles. Part of the process is to mainstream the energy efficiency financing. As “best in class” example was mentioned Australia’s National
Energy Productivity Plan that aims to boost energy productivity by 40% between 2015 and 2030. There are also interesting developments in China, where the current five-year plan aims to green the financial system from the ground up and thereby achieve drastic improvements of energy efficiency. Moreover, USA has built a portfolio of EE financial instruments and green regional banks.

**Presentation**

**High Level Group (HLEG) on Sustainable Finance - by Mr Ph. D. Mieczysław Groszek**, President (CEO) of the Foundation Cashless Poland and HLEG member, representing the Polish Bank Association

The High Level Group (HLEG) on Sustainable Finance is an initiative of the EU Commission taking point of departure in a global need to address climate change and to support transition to a low-carbon, more resource-efficient and sustainable economy.

The scope of HLEG is to improve in the financial system, thereby overcoming gaps such as aligning financial regulation with sustainable development goals, time misalignments and need for better incentive structures. Associated topics are to ensure capital allocation and consistency of intent across the investment chain as well as integrating externality costs.

HLEG include various stakeholders, notably from the financing sector and NGOs. The Group has prepared recommendations within 30 topics on how to improve sustainable finance, of which half of them were presented. Among the topics are to enhance green bond standards and labels and strengthen the investor duties. Moreover, institutional investors and other parts of the capital markets are to be activated along numerous other initiatives.

**Presentation**

**Energy efficiency investments and financing schemes at EU level - by Mr Przemysław Kalinka**, Programme Manager at the Directorate-General for Regional and Urban Policy, European Commission

The presentation focused on the EU cohesion policy support for energy efficiency in the period 2014-2020. Under the European Structural and Investment Funds (ESIF) is allocated EUR 454bn and under the Cohesion policy (ERDF, CF, ESF) EUR 352bn

A thematic concentration entails that more developed regions, regions in transition and less developed regions are required to use resp. 20%, 15% and 12% on promoting a low-carbon economy. This includes measures like RES, energy efficiency in enterprises, energy efficiency in housing, smart grids, low-carbon urban strategies including mobility, innovation in low-carbon technologies, high-efficiency CHP and co-generation. At the same time, compared to the 2007-2013 period, support to energy efficiency in housing sector has been highly encouraged.
The ESI Funds is mainly given in form of grants, but with increasing emphasis on the use of financial instruments. EC’s internal target is to achieve 20% of low-carbon economy allocation to be implemented via FI's.

EU cohesion policy support for energy efficiency in Poland comprises an Operational Programme Infrastructure and Environment managed at the central level as well as 16 Regional Operational Programmes. There is allocated EUR 2 billion energy efficiency in buildings, for the public sector as grants and for the multi-family housing sector mainly via FI's and repayable assistance. Further is allocated EUR 385 million for energy efficiency in enterprises. Other support areas are development of district heating, high-efficiency CHP, low-carbon strategies for urban areas (including sustainable mobility), rail and urban regeneration.

EU cohesion funds also support an initiative on energy efficiency in the single-family housing in Poland, incl. matching public and private funding, in partnership with the World Bank and the Ministry of Economic Development. The lessons learned of this initiative should be applicable all across the country.

Mr. Kalinka concluded that supporting low carbon-economy and energy efficiency is at the heart of the reformed 2014-2020 EU cohesion policy, including an increased role of financial instruments instead of grants and that coordination of different instruments supporting energy efficiency is crucial.

Presentation

National State of Play

Mr. Marcin Janiak, Head of Unit in the EU Funds Department, Ministry of Energy, Poland

Poland is the biggest recipient of structural funds in the 2014-220 period. In the previous programme period, grants were the main mechanism used to disburse funds, but in the current period, some financial instruments, plus repayable assistance (blended loans and grants) are being deployed. Overall, there is allocated 4.3 billion EUR of European funds for energy efficiency measures in Poland. The support is divided on four areas: 1) Enterprises, 2) residential and public buildings, 3) district heating and cooling and 4) high efficiency cogeneration.

Within the 16 Regional Operational Programmes (covering Polish regions/voivods) there is allocated 1,886 MEUR for energy efficiency undertakings, of which 312 MEUR concern financial instruments. There is a wish for more use of financial instruments, but the procedures are found to be overregulated and there is recommended less administration onwards.

The current low interest in repayable instruments was mentioned among the key issues having impact on the implementation of energy efficiency projects. Other aspects were the complicated requirements regarding support calculation and need for capacity building of beneficiaries.
Mr. Vladimir Sochor, Director of Department of Energy Efficiency and Savings, Ministry of Industry and Trade, Czech Republic

In 2015 a new Department for energy efficiency and savings was established within the Ministry of Industry and Trade. The National Energy Efficiency Action Plan produced in 2014 sets the framework for action. A target of 50.67 PJ indicative national energy savings was set, but savings delivered by 2020 look to be as high as 52 PJ according to actual estimation.

More than 90 billion Czech crowns have been allocated to energy efficiency in the 2014-2020 structural fund programmes and Czech national programmes, but there are issues with the rate of draw-down of these funds, in particular for the business sector, where only 20% of available funding has been allocated. There is a wish for more use of financing instruments. The EPC concept is considered not least important in the public sector and the ministry also look for the introduction of voluntary schemes.

Outside of structural funds, the ENERG programme is established, where the financial source comprise incomes from the sale of emissions trading allowances, under which a €5 million fund has been implemented with the Czech-Moravian Guarantee and Development bank. The initial programme will offer low interest loans and repayment grace periods for energy saving by SMEs in Prague. The Ministry of Industry and Trade’s ENERG programme is supporting energy savings in the commercial and corporate spheres and is offering loans with favourable terms.

EFEKT is a new programme currently announced for the five-year period 2017 – 2021 with a budget for the entire program period of 750 million CZK (i.e. 60 million EUR and 12 million EUR per year) that can provide public subsidy for renovation of public lighting and, in particular, motivational support for the preparation of energy-saving projects.

Ms. Petra Stretavska, Senior Advisor, Department of International Energy Relations, Ministry of Economy of the Slovak Republic

The presentation covered an overview of the target, legislation, strategy-action plan, energy efficiency in sectors, financing aspects and the plans and prospects of energy efficiency financing in Slovakia. The country has one of the highest targets in Europe for energy saving by 2020. Indicative targets for primary energy consumption and final energy consumption are already being met. A new National Energy Efficiency Action Plan has been produced, showing that 10 PJ of energy savings were delivered from 2014-2016, with 50% of this being delivered from buildings. €5.6 billion of funding were deployed over the same period, including EU structural funds.

Additional support is needed, from both the private sector and from the state, in particular in the buildings sector. There is a state fund for multi-family residential buildings, which allows for the combination of funds from national budgets and structural funds through the three Operational Programmes. Moreover, it entails mandatory
creation of "Refurbishment Fund" for every building block. The JESSICA instrument is used for help in project preparation.

Support for industry has been made available through two funds - SLOVSEFF II and SLOVSEFFIII. Loans are offered to business and industry via EBRD and through intermediary.

Presentation

Ms Agne Kazlauskaite, Head of the Financial Instruments Division, Ministry of Finance, Lithuania

Lithuania is proactive on using financing instruments due to the policy goals of transition to a recourse-efficient economy. Two main instruments for the 2014-2020 period concern the residential building and public infrastructure, the first targeting multi-apartment buildings and the latter public buildings and street lighting.

Within residential buildings one instrument is called the multi-apartment modernisation fund of 124 MEUR (also known as ‘VIPA’) as well as Jessica II FoF including a Leverage Fund of all together 880 MEUR managed by EIB. The instruments provide loans for energy efficiency measures, Jessica II can also provide guarantees.

Under VIPA is planned an EE investment platform of 100 MEUR and in relation to the Leverage Fund is planned further funding (‘Junker fund’) of 500 MEUR.

For the public buildings is put in place an energy efficiency fund of almost 100 MEUR that can provide loans (direct and via ESCOs) for renovation of central government buildings and guarantees for loans granted by commercial banks for street lighting modernization projects. Another instrument is a municipality owned building fund of 17.3 MEUR that can provide loans for renovation of municipal buildings. Both these instruments refer to VIPA. The operation of the funds is not as easy as it may seem due to reluctance from public institutions to borrow.

Presentation
PARALLEL SESSIONS

PARALLEL SESSION 1.1: MAKING ENERGY EFFICIENCY INVESTIBLE

Session chaired by Ms Céline Tougeron, Project Advisor, Executive Agency for Small and Medium Enterprises of European Commission

Presentation on the PF4EE initiative and risk sharing facility developed under Smart Finance for Smart Buildings initiative, Mr Andreas Piontek, Energy Expert, Projects Directorate/ Energy Efficiency Division / ELENA, European Investment Bank

Energy Efficiency is a key priority for European Investment Bank (EIB) lending and in 2016 EIB lent over 3.6 billion Euro to energy efficiency projects, 74% of which were on buildings.

Key products and services to support this activity in include the Private Finance for Energy Efficiency (PF4EE) scheme, which can provide loans to financial intermediaries, which are then passed on to final investors. It can also take the form of a risk sharing facility, mitigating potential losses on loans. A consultancy service is also available for financial intermediaries, to help them build project pipelines.

In support of the EU Smart Finance for Smart Buildings Initiative, a new single financial instrument has been launched that combines a risk sharing facility with technical assistance and in some cases a grant component (first loss layer, varies by Member State). This new instrument is aiming to unlock an additional 10 billion Euro of lending to private housing.

The European Local ENergy Assistance (ELENA) facility is also available, providing grant funding to cover up to 90% of the preparation cost of investment programmes. There is a leverage factor of 20:1 (final investment must be at least 20 times the amount of grant provided), with clawback in place if this is not achieved. By the end of an ELENA programme, there must be some form of contract signed or tender issued in order to “claim” the investment. The programme typically supports renovation of public and private buildings, investment in renewable energy, district heating and smart grids. There is also a component on transport, for example electric buses and public transport network extensions.

Presentation

Presentation of the Energy Efficiency Financial Institution Group underwriting toolkit, Ms Monika Ledzion, Finance Expert

The Energy Efficiency Financial Institutions Group (EEFIG) was established in 2013 by the European Commission Directorate-General for Energy (DG Energy) and United Nations Environment Program Finance Initiative (UNEP FI). It has engaged over 100 organisations and has had a high level of representation from the insurance industry and financial institutions. EEFIG has produced an underwriting toolkit, which has developed a common language for risk appraisal and developed tools to evaluate financial effectiveness of energy efficiency projects. The Toolkit is structured to tackle the problem sector by sector.
For beneficiaries from energy efficiency projects, the Toolkit provides project lifecycle definitions, showing how energy efficiency programmes work at longer timescales than just those of commercial credit. The Toolkit also demonstrates that EU structural funds don’t have to be the only source of financing for energy efficiency. Examples are given of energy efficiency programmes financed through commercial credit and many examples are given of different types of financial instruments; leasing instruments, service contracts and others.

The toolkit also shows how wider social value considerations are being taken into account alongside energy bill savings and potential asset value increases.

A project assessment process is presented in detail, which includes work on the assessment of risks associated with energy efficiency projects. The Toolkit links to the De-risking Energy Efficiency Platform (DEEP) database, which contains a wealth of data that can help with baselining of projects.

Presentation

Investor Confidence Project in Germany, Mr Frédéric Brodach, Managing Partner, Serimus S.A.

Lack of standardization in energy efficiency projects results in increased transaction costs and higher performance risks. Non-standardised underwriting procedures, project complexity, heterogeneity and granularity increase the associated risk perceived by investors and banks and may prevent financial institutions to enter this sector all together.

The Investor Confidence Project (ICP-Europe) Investor Ready Energy Efficiency (IREE) label has been developed to standardise the development process of energy efficiency projects in buildings, industry and infrastructure. The project’s intention is to lower due diligence costs, to enable the aggregation of projects and to increase the confidence in projected energy savings. The label brings transparency, trustworthiness and consistency by foreseeing a two-tier system including a third-party verifier.

The IREE methodology defines phases to the process and requires standard documentation elements at each stage of the project development, delivery and implementation and during the monitoring process. Project developers are asked to submit this project information to the third-party verifier who delivers the label to the project if the documentation is compliant with the IREE methodology.

Only few stakeholders of the financial industry are engaged in energy efficiency as it is a rather complex and in transparent asset class. Coming forward with an IREE certified project gives confidence to financiers. The ICP Europe team has constituted an investor network that knows and trusts the label and that is offering better finance conditions to labelled projects.

Presentation
Renovation decision making is a very personal decision, but buildings account for 40% of Europe’s CO₂ emissions, so we need to act. We need standardization and a set of rules to guide the market in the right direction. If we don’t implement energy efficiency through European capital markets union, then we may lose the battle.

Renovation decisions mean two things for banks; when you take a home loan, when you have more disposable income then your probability of default goes down. This should be addressed in banking (Basel 3) models. IT systems are needed to help banks understand what happens when you renovate a house (and energy bills go down). If you don’t repay a home loan, then the bank will sell the house and if it has been renovated, then it is likely to have higher value. Mortgages are around one third of the funds lent by banks, so if there is an IT system there, then this is also good for other systems in banks.

If on a home you renovate and improve from F to a B energy performance rating, then there will be a difference between current Loan to Value ratio and future Loan to Value ratio. So if an improvement is made, then bank may be able to loan you more money. For this to become the norm, expert advisers are needed on the types of works to be undertaken (and this should channel public money (such as local grant funding) as well as money coming from the bank). In this way, the mortgage is then linked to energy consumption. The Energy Efficient Mortgages Action Plan (EEMAP) project is developing best practice in this area and is seeking to promote it and to standardize bank procedures for home energy efficiency renovation loans. National standards are needed based on national tradition.

New standards are being developed to guide the granting of a mortgage, and all of this work will be integrated through one common data platform. A pilot is planned from March – June 2018, after which data will be collected for two years.

Presentation

PARALLEL SESSION 1.2: MAKING ENERGY PERFORMANCE CONTRACTING MORE ATTRACTIVE

Chaired by Mr Marcin Jamiołkowski, Head of Programming Unit in Department of Energy and Innovation of the National Fund for Environmental Protection and Water Management, Poland

Activities of the Polish Ministry of Economic Development to support ESCO projects in public sector in Poland, implemented in Public-Private Partnership Form, Mr Michal Piwowarczyk, Deputy Director, Department of Public-Private Partnership, the Polish Ministry of Economic Development

The policy objective is to increase the scale and effectiveness of PPP investments, incl. that the projects are to bring economic and social benefits.
Today there are 150 PPP projects in Poland, of which there are 18 signed PPP contracts for projects in the field of energy efficiency improvement of public utilities. The contracts represent an investment volume of PLN 319 million gross (around 75 MEUR) and all projects are implemented by local governments with a duration from 8 to 15 years. Moreover, there is a pipeline of 31 projects in the field of energy efficiency improvement of public buildings and modernization of street lighting - currently in various stages of preparation - with an investment volume of approx. PLN 476 million (around 115 MEUR).

The Ministry works to promote the PPP concept and there is adopted a strategy document in this regard, incl. how to overcome the quite large reluctance towards PPP. A.o. this entails free training for potential public entities and help to consultancy services. A project like Sosnowiec project has high promotion value and the Ministry gathers information on such successful cases and disseminate via the ministry’s website.

Moreover, the Ministry encourages public entities to submit projects with a volume more than PLN 20 million in open recruitment.

See more at www.ppp.gov.pl

Presentation

Example of Energy Performance Programme in Poland (thermo-modernisation of public buildings of the City Sosnowiec in combination with White Certificate), Mr Arkadiusz Lehmann, Director of Energy Management Centre, Siemens Sp z o.o., Poland

The goal of the project has been to undertake real, guaranteed and comprehensive improvement of the public building infrastructure in the town of Sosnowiec. It has been implemented as an EPC project where the contractor (theESCO) carries the project risk and thereby is encouraged to maximise the EE performance. The project preparations took one year with dialogue between the ESCO and the client (city of Sosnowiec) leading to an EPC contract with the aim to generate at least 20% savings in 87 building facilities. The EE measures were realized in one year due to a performance guarantee for a 10 years period, incl. provision of a certain level of temperature in the buildings. The energy optimization program included elements as on-the-spot checks, optimization of building management systems, remote monitoring and energy management.

The project has now been in operation for four years and the EE performance has been achieved in accordance with the goals. Mr. Lehmann made clear it has been a complex contract, encompassing a need to be strict on competencies and action plan.

In the accompanying discussion it was asked what will happen after the 10 years guarantee period. It was responded that after the project period the ownership is transferred to the client. An economic surplus of the project period will be divided 50/50 between ESCO and client.

Presentation
Bulgarian Energy Efficiency Fund on financing ESCOs, Mr Marko Markov, International Energy Efficiency Finance Expert, Econoler, Bulgaria

The presentation took point of departure in Econoler’s experience with the Bulgarian Energy Efficiency and Renewable Energy Sources Fund (BEEREF). Established in 2005 it serves a revolving mechanism for financing commercially viable EE and RES projects. The fund was capitalized through both international donations (including the Global Environment Facility (GEF) through the World Bank and Austrian Government) and national donors, such as the Bulgarian Government and local financial institutions and companies.

BEEREF can both provide direct loans to final beneficiaries and loans via ESCOs. It can also provide financing of ESCO activity through purchase of receivables, where BEEREF purchases up to 90% of EPC receivables. By Q3 of 2017 the facility has supported 194 projects, of which 53% in municipalities, 35% corporate clients and 12% others (hospitals, universities etc.) and with a total investment volume of around 40 MEUR.

Mr. Markov summarised the advantages and disadvantages of the ESCO concept. On the positive side it provides a One Stop Shop for technical solution and financing, with no credit risk (off balance sheet debt) for the beneficiary and where the payment is based on the project savings. On the negative side was mentioned limited flexibility of the project design and implementation.

Reluctance of the local banks to extend longer term loans matching the usually long repayment periods of a typical EPC and the requirements for firm loan collateral (other than pledge on the EPC receivables) were among the barriers for ESCO business growth in central and eastern Europe that were identified and discussed. EPC projects are technically complicated and thus hard to be understood by financiers, also meaning they are hard to standardise and replicate. Potential measures to remove the barriers can be to enhance cooperation between ESCO practitioners and local financial institutions and improve the existing guarantee mechanisms as well as energy performance measurement and verification protocols.

Presentation

Renovation of multifamily buildings through energy performance contracting in Latvia, Mr Nicholas Stancioff, Funding for Future, Latvia

The Latvian Baltic Energy Efficiency Facility (LABEEF) is an initiative to streamline financing instruments with a key objective to help developing sustainable business models on a large scale in harmony with the State policy and provision of the necessary funding. In the current situation, only a small percentage of multifamily buildings are properly renovated, whilst 85% of the buildings do not correspond to current heat consumption requirements – and where the required financing amount to more than 12 billion EUR.
Due diligence of existing ESCO projects in Latvia has shown positive results, incl. a low default ratio of less than 3%, and LABEEF is about upscaling this experience via de-risking and aggregation. As part of this LABEEF is to buy standardised 20Y EPCs from ESCOs, accompanied by an IT platform to support standardisation and the upscaling. Ultimately, the initiative can provide a cascade of benefits to citizen, society and government while building an industry.

A video was presented to show the perspectives.

**PARALLEL SESSION 2.1: ENERGY EFFICIENCY FINANCING IN THE BUILDINGS SECTOR**

Chaired by Mr Bolesław Meluch, Advisor to the Management Board, The Polish Bank Association

**Instruments of financing thermo-modernization of public and residential buildings applied by the National Fund for Environmental Protection, Mr Marcin Jamiołkowski, Head of Programming Unit in Department of Energy and Innovation of the National Fund for Environmental Protection and Water Management, Poland**

The National Fund for Environmental Protection and Water Management is the largest financial institution in the region financing energy efficiency and renewable energy projects. The Fund has national and EU resources available (17 billion złoty). A lot of emphasis is being placed on comprehensive support of projects, financing is not everything.

Priority Axis I of EU funding programmes includes housing sector work and 500 million Euro of funding is available. This includes support for pre and post install energy audits and implementation of improvement measures in public and multi apartment buildings. Eligible improvement measures include heating, lighting, small scale renewables as well as thermal issues in the buildings. Euro 270 million is allocated in public buildings and Euro 225 million in multi-apartment buildings. The Fund is seeking to promote more ambitious projects, including elements of repayable assistance and those for example where the balance between repayable and non-repayable assistance depends on the level of energy savings achieved.

Some barriers to action have been identified - easy projects have already been carried out and each next step requires increasingly deep levels of financial support. In much of the country project size there is need for small aggregation. Housing associations don’t have a way to collateralise their assets and this leads to problems. There have been some issues with state aid, in particular on housing where a proportion of the building is dedicated to commerce (support has to be reduced accordingly). There is also a lack of capacity and skills, which makes it difficult to prepare applications, and in some places a lack of contractors to carry out the work.
SCALING UP FINANCE FOR ENERGY EFFICIENCY REFURBISHMENTS OF BUILDINGS, Mr Toivo Miller, Principal, Intermediated Green Finance, Energy Efficiency & Climate Change, European Bank for Restructuring and Development

The governing board of the European Bank for Reconstruction and Development (EBRD) have a target to direct 40% of their portfolio into energy efficiency and renewables and they might hit that target in 2017/18. There is vast energy efficiency potential in the building stock. Each building has a limited investment potential, so there is a clear need for aggregation. Building owners are interested in doing anything other than energy efficiency, so there is a lack of expertise, which also breeds uncertainty. Finances may also be scarce. EBRD has a new EUR 200 million credit line (POLREFF) to help address some of these issues. The facility is available to Polish commercial banks for sustainable improvements of residential buildings. EBRD has some previous experience from Poland, through the PolSEFF (Euro 180 million) scheme which provided loans and leases to SMEs.

Other examples of scaling include an EBRD structured loan to the Lithuanian agency VIPA. This didn’t require a sovereign guarantee, as it used the existing flow of loans. The project lifecycle includes financial and technical appraisal and these are linked. EBRD also provided support to the The Latvian Baltic Energy Efficiency Facility (LABEEF) ESCo facility in Latvia. This was targeted towards ESCos with existing successful projects, but that wanted to scale up. EBRD helped with investment guidelines and project documentation.

In conclusion, vertical integration of the energy efficiency process is important (i.e. construction companies not taking financial risk). This helps to align risks and rewards of stakeholders to de-risk and lower transaction costs and facilitate aggregation. In practice this is reflected in standardisation of processes and documentation, including investment guidelines, contract templates and energy efficiency documentation for the secondary market.

Financing instruments for energy efficiency in single-family buildings, Mr Grzegorz Wolszczak, Operations Officer, Poland: catching-up regions Programme, World Bank Regional Office Central Europe in Warsaw

The Poland: Catching-up Regions project that was initiated by the European Commission in collaboration with the Government of Poland aims at delivering practical solutions to developmental bottlenecks facing Polish regions. One of the components of the CuR focuses on designing financial instruments that are to encourage owners of single family buildings (SFBs) to enhance energy efficiency (EE) of their houses (replacing old boilers,
retrofitting houses), which in turn is to contribute to improving the air quality in Poland (reduction of smog, which is mainly cause by the low stack emission). The current pilot project includes two regions Malopolska and Silesia, which house 1.1 million SFBs (out of 5m SFBs in Poland). Both regions have adopted anti-smog resolutions that oblige SFB owners to replace old boilers with modern, low-emission ones, though they do not mandate SFB retrofitting.

The World Bank sees scope for improvement in stronger coordination of the hitherto suboptimal dispersed programs supporting EE improvements in SFBs at the national, regional and local level. An EE and anti-smog national fund (Fund) could be created to pool available resources for boiler replacement and retrofitting of SFBs that would channel them to two groups of beneficiaries via two different instruments. These would be i) almost full subsidy to the energy poor households for retrofitting and boiler replacement, and ii) commercial loans to the energy non-poor households, with potential fiscal incentives, e.g. income tax deduction or a limited subsidy. Further work is currently under way to make these recommendations more specific.

**Presentation**

**Polish schemes to finance energy efficiency in multifamily buildings by BGK managed funds – Fund for Thermal Refurbishment & Renovation and Jessica II Fund in Wielkopolska region, Mr Tomasz Makowski, Specialist in Department of Agency Services, Ms Agnieszka Starczewska, Head in Department of European Funds, Bank Gospodarstwa Krajowego, Poland**

**Thermal Modernization and Refurbishment Fund** aims at supporting investors in conducting thermal modernization projects via regularly granted bank loans leading to improving energy efficiency. Investors who want to get a premium have to apply for a bank loan with an audit attached. Investors send applications for a loan and premium with the attached energy audit to the lending bank. Lending bank after assessing application sends it together with the audit and initial loan agreement to BGK. Then after positive verification by BGK the decision on premium granting is made. BGK sends information on premium granted both to investor and the lending bank. Since 1999 BGK has granted premiums amounting to PLN 2.2 billion.

JESSICA2 Initiative has been implemented under Regional Operational Programs in years 2014-2020. JESSICA2 offers preferential loans with repayment period up to 20 years with financing up to 85% of eligible costs. Other sources can also be used to finance eligible costs. Interest of the loan ranges from 0.15% to 0.5%. The projects to be funded have to show at least 25% savings. There are no additional banking commissions. BGK as Funds Fund Manager manages the amount of ca PLN 550 million for the support of energy efficiency for SMEs across 6 voivodships.

BGK through such funds and actions supports energy efficiency in the housing sector.

**Presentations**
Polish energy advisory scheme, way to facilitate EE investment in the building sector, Mr Wacław Bilnicki, Department Director of LIFE Programme and Energy Advisory Project, National Fund for Environmental Protection and Water Management, Ms Monika Pawłowicz, Energy Advisor in the Voivodship Fund of Environmental Protection and Water Management in Toruń

The Polish energy advisory scheme is putting in place a network of 76 advisers across Poland to support 800 investments in energy efficiency and air quality improvements. The programme is aimed at municipalities and heating companies. The focus is on making energy audits comprehensible by end users.

Presentations

PARALLEL SESSION 2.2: ENERGY EFFICIENCY FINANCING IN THE INDUSTRIAL SECTOR

Chaired by Mr Marcin Janiak, Head of Unit in the EU Funds Department, Ministry of Energy

How to make energy audits obligations more practical in use. Experiences, opportunities and good practice within the industry sector, Mr Michał Bar, Deputy Director, Branch Director in Cracow, Polish National Energy Conservation Agency (KAPE), Poland

The scope of the presentation was how to make practical use of recommendations from energy audits of enterprises in Poland, incl. associated experience, opportunities and good practices.

Energy audits have become mandatory for all type of companies, incl. analysis of the energy consumption and technical installations, supplemented with a list of recommended EE projects including assessment of their economic viability. However, there is currently lack of awareness and motivation to do the energy audits.

There is introduced a system of White certificates to help implementation of the projects, whilst the ESCO concept is not yet so popular in this sector, as the companies tend to find the projects too complex. Mr. Bar reviewed the current sources of funding and expressed a hope for more funding opportunities onwards.

Presentation
Banking instruments of energy efficiency in enterprises in Poland, Mr Adam Hirny, Senior Product Manager, Innovation Projects Department SME AGRO BGŻ BNP Paribas Bank, Poland

Starting in year 2010 BNP Paribas Bank has been operator on the PolsEFF program aiming to increase the energy efficiency in SMEs and associated CO2 reduction. The basic elements have been to provide technical support for SMEs, simple procedures for beneficiaries and offering of 10% or 15% co-financing for projects.

The supported measures have both concerned the buildings and the technological processes of the SMEs. It has been accompanied by an automatic qualification process called LEME to optimize the measures. In the beginning the programme experienced lack of awareness, but many meetings and training of the involved advisers along marketing and popularization improved its effectiveness and led to acceleration of projects.

Altogether, 770 projects worth 88 MEUR have been financed by BGŻ BNPP. The beneficiary companies have been from various industries, incl. a high representation of companies from the micro segment (around 65%). From 2014 PolsEFF was followed by the “Green initiative”, from 2015 PolsEFF II and from 2016 an initiative called EKOLEasingPolsEFF. BNP Paribas Bank declared positive to continue as operator on PolsEFF.

Presentation

Financing the energy efficiency in industry via voluntary agreements in Finland, Ms Kati Ruohomäki, Senior Adviser, Climate and Energy, Confederation of Finnish Industries - EK

EK is an industry association representing 25 federation members from the private sector, incl. 16,000 company members, mostly SMEs, and almost one million employees.

The scheme for voluntary agreements with industries is put in place as a complementary measurement for regulations and taxes to implement the energy efficiency directive EED and the national climate and energy strategies. The scheme implies subsidies for energy audits for SME’s as well as subsidies for conventional energy efficiency investments on a case-dependent basis.

The experience of the scheme reveals a hard competition inside companies, which investments will be approved and that subsidies are especially important for SME’s, whilst subsidies are restricted for large companies under the ETS. One popular initiative concerns development projects within the agreement, where a group of companies, technology suppliers and energy experts focus on specific topic, for instance industrial ovens (such projects are partly self-financed).

It was encouraged that similar type of platforms could be created by Polish industry associations.
Experience of the Learning Energy Efficiency Networks (LEEN) initiative and how it stimulated investments, Mr Mirko Krück, CEO, LEEN GmbH

The scope of the presentation was to share experience of the ‘Learning Energy Efficiency Networks’ (LEEN) initiative and how this stimulates investments Energy efficiency financing in the industrial sector.

LEEN is currently operating in the countries Germany, Austria, Serbia and Belgium, In each country there is a “host” to manage the effort in coordination with a moderator and a consultant engineer towards the target companies. The price to participate is 2000-2500 EUR per company, more in case of undertaking of energy audit.

Of the participating companies 54 % have energy costs between 500,000 and 4 MEUR per year and for 75 % of the companies the reduction of energy (costs) has always been important. The average pay-back of energy saving measures is 3.2 years.

Benchmarking is being introduced as a next step to enable knowledge sharing among participants and stimulating investments.
CLOSING PLENARY SESSION

Session chaired by Ms Céline Tougeron, Project Advisor, Executive Agency for Small and Medium Enterprises of European Commission

Feedback from the parallel sessions

The session started with feedback from the parallel sessions by the moderators:

Session 1.1 on making energy efficiency investible had four presentations, where a main topic was how to increase the interest of investors. It revealed that better understanding of risks and aggregation of investments are key factors in this respect.

Session 1.2 on making Energy Performance Contracting (EPC) entailed the good news that PPP/EPC projects come to fruition on the Polish market, where the EPC project in the city of Sosnowiec is one shining example. It was also seen from the Bulgarian example how proactive use of public funds can make the market work more effectively.

Session 2.1 on energy efficiency financing in the buildings sectors called for strengthened administration of EE renovations, incl. how to undertake works, to seek finance, and to encourage other market players and co-organisation. Moreover, there is lack for instruments for less well-off people as well as taking an ageing population in Poland. A positive development is the offering consultation and advice support to project development, as supported by NFOS. There is need to supplement this with a larger network, incl. auditors and investors, to ensure momentum.

In Session 2.2 on energy efficiency financing in the industrial sector the example of POLSEFF, comprising development of investment mechanisms, provided good food for thought on how to intervene in this sector. Establishing platforms where enterprises get opportunities for sharing experiences on EE measures can be among the ways forward.