FINANCING ENERGY RENOVATION OF BUILDINGS IN ITALY, CROATIA AND SLOVENIA

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Milan

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BACKGROUND TO THE EVENT

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.

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 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 does it help the EU in turning its climate ambition into climate action, it also brings 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 realise the full potential of energy efficiency, public funds will not suffice and private financing will have to be unlocked at scale. In that context, energy policy should create more favourable investment conditions, encourage demand for energy efficiency and help consumers undertake energy efficiency investments more easily.

This event shared best practice on how energy renovation of buildings can be financed with focus on Italy, Croatia and Slovenia, in particular through the use of private funds and innovative financing instruments.

125 people participated in the event. Copies of the presentations from the event can be found at:

WELCOME

Guido Rosa – Vice-President of Associazione Bancaria Italiana and President of Associazione Italiana delle Banche Estere

Italy is currently ahead of EU targets for the deployment of solar, wind and hydro energy. ABI are committed to helping companies realise these plans, supporting the technical skills to build such schemes and supporting the availability of funds to realise these kinds of projects. This is an important role for the Italian banking system.

The Italian banking system has been an important building block, through dealing with climate and sustainability issues, banks are aware of being part of something positive. Banks are present at macro and micro levels – macro through large schemes supported through project financing. To date, this is largely what has been applied. Plus then also the retail sector, where homes and SMEs have been supported through normal loan facilities and consumer credit, which is used in the most part to finance household activities. A large part of the finance sector is devoted to retail initiatives.

But what is the outlook for 2018/19? It should be a positive year for Italy, it will be a growth year and the role of the banking system will continue to be positive. There are two caveats; firstly, quantitative easing by central banks will be adjusted downwards (but not to zero). Secondly, central banks are following a policy that will force the European system to be more selective in issuing loans and providing funding. Take note that banks will be more selective about which projects to support than in the past.

Within this more selective approach, banks will be able to choose the most suitable projects to finance, with features that make them more interesting. The green economy will be a major sector of interest.

Mauro Mallone – Head of Energy Efficiency unit, Ministry of Economic Development

Italy has a new National Energy Strategy, released on 10 November 2017. This shows that Italy is expecting a 10.2 million tonnes of oil equivalent reduction in final energy use in 2030, due to energy efficiency policy measures. To date, energy savings in Italy have been achieved predominantly in the industrial sector but in the coming years we need to concentrate efforts in civil and transport sectors in order to reach our ambitious decarbonization targets. In these areas investment costs to reduce energy use are much higher than in industry. Italy is doubling investment from current levels of € 4 billion/yr in the civil sector (public and domestic buildings) for energy renovation. Government must step in and support this in the right way. We need to ensure better use of public resources by stimulating private investment.

Ilaria Bertini – Deputy Director of the Italian National Energy Efficiency Agency of ENEA

There is a need to accelerate energy renovation actions. The annual energy efficiency report for Italy shows that Italy is on the right track, but that there is more to do, especially in the building sector, which suffers as a fragmented market with individual or small owners. This means that it is not easy to identify decision makers.

ENEA is supporting the Ministry of Finance in analysing tax deduction data for energy. This has provided some useful information about barriers to progress on energy efficiency. Key barriers include information asymmetry between supply and demand, the use of technical language by solution providers and smaller project size. For public administrations it is difficult to aggregate
demand and the inability to put together attractive enough offers makes it more difficult to attract private capital. Another weak point is the decision making chain for energy retrofitting, in which information flows mostly one way. The chain doesn’t have many interconnections; the perceived project risk may therefore be higher than it really is. Projects can become more bankable where more and better information is provided.

Most complex renovation activity is being managed by ESCOs and large service providers, who are acting where the demand is fairly sizeable. ENEA is supporting private entities and public administrations to drive demand for their services.

Together with Gestore dei Servizi Energetici (GSE), ENEA have engaged with public administrations and others to create integrated large projects. They have also contributed to advanced service platforms. The construction market is lagging behind however, on the industry 4.0 programme there is a need to shift from planning to implementation, including by cost cutting and the use of pre-fabrication. This should reduce costs and mistakes.

Together, these measures should reduce information asymmetry. ENEA are working with the Ministry of economic development on a three year plan, designed to put Italy in energy class A.

Presentation

PLENARY SESSION 1: EUROPEAN AND NATIONAL POLICY CONTEXTS

EU policy initiatives to support finance for energy renovation of buildings

Claudia Canevari – Deputy Head of Unit for Efficiency, DG Energy, European Commission

The Clean Energy for all Europeans package was brought forward last year. It seeks to make European the world leader in renewable energy, put energy efficiency first and place consumers at the centre of the energy market.

Over the last 10 years in Europe, economic growth and energy use have decoupled. Significant energy savings have been delivered through eco-labelling and eco-design. The worst performing products have been removed from the market, but consumer choice remains. For the coming ten years, building renovation must be accelerated. Europe’s building renovation rate currently stands at 1% per year and this needs to improve. This will change the role of the financial sector, as building renovation is more expensive than appliance replacement. As we move forwards, there is also an increasing role for IT and smart technology – it is time to exploit these developments for energy efficiency.


As part of the package, a new initiative, Smart Financing for Smart Buildings was proposed. This is structured under three three main pillars; the more effective use of public funds, aggregation and assistance for project development and de-risking.
There has been progress since the package was announced under each of these areas. Highlights include:

Under Pillar 1: **Eurostat guidance** on public accounting for energy performance contracting has been updated (See session 1B for more detail). The series of **Sustainable Energy Investment Forums** events are also helping to build capacity across Europe.

Under Pillar 2: The **ELENA** and Horizon 2020 **Project Development Assistance** programmes have been strengthened. There are also other Horizon 2020 calls for funding in relevant areas, including on building renovation.

Under Pillar 3: The De-Risking Energy Efficiency Projects (**DEEP.eefig.eu**) database has been established, which now contains data on more than 10,000 projects. The Energy Efficiency Financial Institutions Group has also released its **underwriting toolkit** to help drive investment.

**Presentation**

**Mobilising the financial sector on energy efficiency**

**Martin Schoenberg – Energy Efficiency Project Coordinator, UN Environment Finance Initiative**

UNEP-FI are working with banks, investors and insurers and supporting their journey to improve the sustainability of the economy.

Why are investors and banks interested in energy efficiency? Improving energy efficiency is a good risk management tool (for example lowering mortgage repayment risk by lowering energy bills and reducing regulatory risk), it can help with compliance with regulation and fiduciary duty and deep renovations can drive increases in the value of property.

A factor eight increase in energy efficiency is needed to stay on a 2 degrees centigrade global temperature rise pathway and to meet Paris Agreement commitments. The highest untapped potential in the energy efficiency market is still in the buildings sector, although there is significant potential elsewhere too.

In 2015 energy efficiency investment was almost on a par with that for renewable energy. Renewable energy is usually supported through project finance, which is discrete and visible. Energy efficiency financing may not be discrete or standalone.

UNEP-FI are mobilising the financial sector and have produced the **G20 Energy Efficiency Investment toolkit**. The toolkit links public and private investment – unprecedented levels of collaboration between the two are needed. 120 banks from 40 countries are already involved in the initiative. In addition to the toolkit, there is a **G20 energy efficiency investor statement**, which links a number of important actors, including institutional investors.

**Presentation**
Support available from the European Investment Bank

Berna Topaloğlu – Senior Energy Engineer, European Investment Bank

The European Investment Bank (EIB) is the largest multilateral lender in the world, offering support and financing in 160 countries. Key priorities include supporting EU policy on the climate action priority. There is a target for 25% of all of their investment to be directed towards the energy transition. More than €1 trillion of investment will be needed to meet EU 2030 targets and given low rates for new building construction in Europe, we have to retrofit – a large and untapped potential for energy savings. Amounts of EIB lending to energy efficiency between 2012 and 2016 have increased by over three times.

There are well recognised barriers to energy efficiency, projects may be small and fragmented, payback periods can be long, there split incentives between landlords and tenants and there are limits on the capacity of beneficiaries to start projects. These can all be overcome.

There are multiple instruments and types of financial products available through EIB. These include lending through standard loans, but also the Private Finance for Energy Efficiency (PF4EE) programme, other financial blending options and a suite of advisory services.

EIB, with the European Commission also launched the European Fund for Strategic Investments (EFSI). As of October 2017, 21% of projects supported were in the energy sector. The fund is scaling up energy efficiency investments, is helping Member States to meet renewable energy targets and is supporting work on energy networks. In Italy, EIB and BPER Banca Group are providing €50 million for energy efficiency projects implemented by businesses of all sizes. In Croatia, a €40 million scheme to support energy efficiency in SMEs has been put in place by EIB and ZABA Bank.

In addition to this implementation funding, EIB is also providing funds for project preparation, through the ELENA facility.

Energy efficiency is a priority for EIB, who can act as an aggregator, can provide lending through intermediaries, can provide investment funds, can provide technical assistance and are trying to identify innovative approaches.

Presentation

STRATEGY FOR FINANCING ENERGY RENOVATION OF BUILDINGS IN ITALY, CROATIA AND SLOVENIA

Mauro Mallone – Energy Efficiency unit, Ministry of Economic Development

Italy GDP – growth vs EE

Italy’s current annual reduction rate in energy consumption is around 1 Mtoe and the breakdown of this reflects the pattern over the past few years with 60% of this in the industry sector, and 40% in the residential sector. The change required is not so much in the reduction of consumption overall, but about which sectors to attack. Residential buildings, commercial premises and public buildings are the new challenge.

Existing tools are being re-oriented towards the domestic and civil sector. Tax deductions are available for the renovation of buildings. Improving the effectiveness of this measure is being discussed in the current budget law. Government is looking to improve the cost benefit of the support measure, providing a percentage to be deducted from taxes in relation to the expected
savings. For deep renovation actions, the tax deduction level should increase up to 85% (from the current 65% maximum) if energy renovation is associated with measures to protect the building from earthquakes.

A guarantee fund is also being discussed for inclusion in the Budget Law. This is designed to help overcome difficulties for those less well off, who can find it hard to access tax deductions. Many households cannot afford 10 or 20 thousand Euro to renovate. The guarantee fund will support loans to those who want to renovate their apartments. An initial allocation of €50 million is being discussed, able to mobilize investments up to €600 million.

For commercial buildings, white certificates (energy efficiency obligations) are an important tool, even though most go to industry. 25% of them are for action in the civil building sector. Then there is also the thermal bill/law, under which €300 million was invested in 2016. Italy is on track to meet the EU 3% central public buildings renovation target.

By end of 2017, a National Energy Efficiency Fund should have been launched. This will grant low interest loans and offer guarantee funding.

Alongside these financial instruments, the National Energy Strategy has also shown that it is necessary to stimulate energy efficiency market, through awareness raising. Through the promotion of operator skills it might be possible to increase the attractiveness of schemes.

An additional €110 billion investment on a cumulative basis is needed to achieve the 2030 energy efficiency goals, around €8 billion euro per year. Italy has provided about €4 billion of public funds – this contribution should double and private investments should be boosted.

Presentation

Irena Križ Šelendić – Head of Sector for energy efficiency in buildings, Ministry of Construction and Physical Planning of Croatia

Croatia has various programmes underway to deliver on its energy efficiency targets. One major programme (2014-15) covered public buildings, with 69 buildings covered by contracts totaling around €82 million, which will deliver 70 GW of energy savings. Under the programme, ESCOs are investing and taking risk, there is no public sector cost. The ECOfund provides grants of 40% of cost to public sector. Energy Performance Contracts last for 14 years in the programme. 55% savings in delivered energy have been achieved.

A new programme for public buildings was also established using ESIF funding under the 2014-2020 spending programme. 50GWh of energy savings are planned and €100 mill euros of funding have been allocated. Multiple implementation models have been established that allow for the use of different contracting permutations (including energy performance contracting models or the use of an authority’s own funds).

A public call for the renovation of multi-apartment buildings has also been issued. This has €37 million allocated across 2,355 applications (applications can cover 85% of preparation work and 65% in implementation costs). In total this fund will leverage over €135 million of renovations delivering on average 66% energy savings.

A separate fund for energy renovation of single family buildings was also opened in 2014. This has 15,000 projects contracted for €89 million euro. A new call is planned, using funds from the European Regional Development Fund.
Slovenia’s long term renovation strategy was adopted in 2015. Five sets of guidelines were published in support of this.

Building stock identification was the first aim of the strategy. More than 71% of buildings in Slovenia are apartments, 18% are private sector commercial buildings and 11% public sector (when considered by floor area).

The strategy set long term goals and laid out three action plans, on renewable energy, sustainable energy and Nearly Zero Energy Buildings.

A financial framework to reach the goals was also set out, and this identifies the need for €415 million of funding. This is mostly implemented through four funding sources; Cohesion Funds, ESCO equity, financial instruments and public funding.

In summary, 40% grant and 60% ESCo funding is the preferable model. Four pilot projects or approaches for different sectors and building types have been launched. An approval for ELENA to assist in project preparation has been received for projects on Government buildings.

Energy renovation of military buildings

The Italian military is being reformed to become more sustainable and more resilient. Work has been undertaken to understand their contribution to emissions, to identify cost effectiveness and reduction energy consumption, to implement energy efficiency in systems and buildings and to decrease the environmental footprint of military operations, both domestic and international.

A new structure was set up in 2015 to provide a single contact point for energy, including diagnosis, awareness raising and project aggregation. This came out of the 2013 national energy efficiency policy, in which it was stated that there should be action on energy security, in which national energy saving goals were set, to which the military could contribute, and in which innovation and new technology were identified as opportunities.

One of the central goals of a new military strategy document to be prepared in 2017 will be energy and environment.

Aside from energy efficiency, the Ministry of Defence is aiming to improve systems resilience through the development of smart military districts, introducing new governance and managing energy, water and waste using smart technology. It is recognized that the military need equipment capable of operating in extreme conditions. Smart military districts are using Building Management Systems, the Internet of Things, and interconnected buildings including energy generation.

A number of building improvement projects have already been carried out, and the Ministry is working with ENEA and using ELENA funding going forward, and will shortly issue calls to find funders and link service providers on future projects.
PARALLEL SESSIONS

1A. MAKING ENERGY EFFICIENCY ATTRACTIVE FOR THE FINANCIAL SECTOR

Moderated by Romano Stasi – Secretary General, AbiLab

The work of the Financial Stability Board on climate related financial disclosure is important, looking at metrics for the banking sector to understand green rating of business and enterprise. Green loans are being widely discussed, but must comply with regulated processes. There are many indicators in use and ABI are involved in discussions on these with the European Commission and others.

Banks are presenting their own individual strategies as market differentiators. ABI will shortly publish a report on Italian sector - more than 70% of Italian banks have dedicated products for energy efficiency. The sector does need tools from the Ministry, including guarantee funds. AbiLab is also undertaking work on bank buildings themselves, there are 40,000 of them in Italy. A measure of CO₂ emissions per bank employee has been developed for individual banks.

Italian banks are working to reduce red tape and to promote incentives for energy efficiency. These topics are important for banks and their stakeholders.

Presentation

Standard protocols for a new approach to energy efficiency financing

Antonio Ciccarelli – CEO, Servizi Energia Ambiente

Within energy renovation and energy performance contracting projects, it is important to gain the trust of the client. Italy is the only EU Member State with an ESCo certification scheme and white certificates (energy efficiency obligations on energy providers) can only be approved if the delivery ESCo is certified. All market entrants have to go through this process. Italy is ahead of other EU Member States in this regard. An ACEEE study ranked Italy second in the world on combining policy with results achieved in the ESCo sector.

Having a common language is an important step, and one that is shared between customers, contractors and financiers. The SEAF project (described in more detail below) is bringing together multiple elements to reduce project risk and act as an aggregator.

The Investor Confidence Project (ICP-Europe) is based on the principle of standardizing. This is already happening with PV projects, but for energy efficiency, projects are typically very different. ICP seeks to standardise the project development process and includes monitoring of the project development process to improve reliability. It is hoped that the ICP Investor Ready Energy Efficiency (IREE) standard will become the standard in future for energy efficiency projects. This certification reduces risk and due diligence costs. On a several million Euro project, if due diligence costs are several hundred thousand Euros, then this may affect overall business case viability. ICP has a step by process, with relevant information for decision makers at each stage. The protocols are available online and are being promoted across Europe.

Presentation
The Underwriting Toolkit of the Energy Efficiency Financial Institutions Group (EEFIG)

Mariangiola Fabbri – Senior Project Manager, Building Performance Institute Europe

The Energy Efficiency Financial Institutions Group (EEFIG) includes some 20 financial institutions who have shared their experience on working in this field in contributing to reports and toolkits.

Financial institutions are generally not familiar with the issues associated with energy efficiency lending, and there are language differences amongst them and with borrowers. So, part of the idea of EEFIG was to create a common language.

The EEFIG Underwriting Toolkit is a living document, with each chapter directed towards different players from within the financial sector:

The first section, “Financial institutions and energy efficiency”, is aimed at senior management and executives new to energy efficiency or already considering introducing energy efficiency related products or programmes.

Origination teams and project developers: The second section, “Financing Energy Efficiency”, sets out the different ways in which energy efficiency can be financed and the types of structures and contracts that can be used.

Project developers and risk teams: The third section, “The Project Life Cycle”, describes the overall process of developing and executing an energy efficiency project.

Risk teams, project developers and originators: The fourth section, “Value and Risk Appraisal”, identifies the various sources of value that can be created by energy efficiency projects (including non-energy benefits), such as increased asset value, increased productivity and increased health and well-being.

The document is helping financial institutions evaluate and understand risks, bringing a shared language in evaluating investments and is helping to create projects that are better aligned to need of financial institutions.

There is scarce availability of data today that links energy performance and financial performance. Energy data may be decoupled from those who hold financial data. There should be greater labelling and tracking energy efficiency investments, like loans, so that performance can be evaluated. This should be done with a common language in a standardised manner.

The toolkit will be translated into Italian and is accompanied by an online resources section to support use of the approaches recommended.

Presentation
The BUILD LAB Financial Platform – Innovation and Finance Laboratory for Sustainable Building

Teresa Bagnoli – Building and Constructions Strategic Development, ASTER

The EU funded BUILDINTEREST Project (Improving the attractiveness of investments in energy efficiency and sustainability in buildings) aims to structurally reduce uncertainty and increase trust in investments in sustainable energy in buildings. This is achieved mainly through reinforcing the trust of investors in sustainable energy and energy efficiency projects, and by reinforcement of the links and creation of a structural, long-term dialogue between public policies, investors and innovative companies.

BuildLab is an agency for financial innovation in renovation projects. They want to define solutions that involve all stakeholders. They are also working with Nomisma, an economic analysis institute. They have thematic focus areas; residential buildings and multi-apartment buildings, improving the use of public funds through the use of financial instruments, working at regional level on guarantee funds to be integrated with national funds. They are also looking into new models to increase bankability of renovation projects. They are currently defining useful tools and want to define guidelines for a review of the framework of regional financial instruments. They are also looking at synergy with other EU projects.

BuildLab want to standardise renovation procedures and quality marks and understand technical assumptions on the basis of building type.

A series of events are planned as part of the project. On February 15 2018, there will be a BUILDLAB event in Bologna that will present the results of the project (including the model developed and results achieved) and subsequent events in the Netherlands and France.

Presentation

Evidence of green value in the property market

Silvia Cappelli – Director, CRIF

CRIF specialise in credit information systems and business outsourcing. In Italy, they carry out about 100,000 property appraisals every year using an automated valuation model.

CRIF have used a sample of property evaluations (17,000 cases over the past several years) to seek to isolate the impact of energy efficiency variables on property market value using automated value modelling (AVM). For each energy performance certificate rating class for buildings, they have evaluated the value difference. For class A, B and C buildings, value is underestimated, while for E, F and G the model without energy efficiency overestimates value. So, there is direct evidence of the impact of energy efficiency improvements on the market value of property.

There has also been an analysis of credit bureau scores by energy efficiency rating. A clear difference is observable between properties rated A or B and those rated F or G. The payment default rate (buildings with three unpaid energy bill instalments in 12 months) in the worst energy efficiency classes is twice as high as those properties with a higher rating. So, with green loans, customer repayment risk is reduced. The data also show that the ratio of loan to value is lower for higher energy rated buildings.

Presentation
The Energy Efficient Mortgages initiative

Luciano Chiarelli – ECBC Steering Committee Member, EeMAP Banking & Finance Committee Member and Head of Group Secured Funding, UniCredit

Buildings account for 40% of CO\textsubscript{2} emissions, so to meet Paris targets, we need to act in this sector. European Commission and public spending will never be enough on its own, so the private sector is becoming increasingly involved. The European Mortgage Federation-European Covered Bonds Council (\textsc{EMF-ECBC}) has a role in linking stakeholders and increasing the involvement of banks.

There are 510 million people in the EU and of those, 350 million are homeowners. There are also a large number of banks, with whom these customers interact. The Energy Efficient Mortgages Action Plan wants to use these existing contact points to stimulate work on energy efficiency. When a bank entry point is established, energy efficiency experts can then come in and help families to understand their energy expenditure and integrate health and wellbeing.

Guidelines are currently being developed, and the objective of the project is to trial these in 2018/2019. Currently, banks need to strengthen their capital and as part of this it is important to use green or energy efficient mortgages. Mortgage lending makes up around one third of bank balance sheets and the probability of default is lower for green mortgages. Typically, high energy performance homes are less risky borrowers. EEMAP also want to show that disposable income for households is higher if energy expenditure is lower, and this should impact on mortgage repayments.

The idea of the project is that when a borrower goes to ask for a mortgage, a preliminary assessment based on current energy certification will be carried out. Then an energy efficiency expert who can look at possible improvements and costs and savings will be brought in and recommendations prepared. Then once renovations have been carried out, a post install assessment of energy efficiency is undertaken and the green mortgage is granted. Upgrades can change property value by 10-20%.

The EMF is coordinating Italian banks and more broadly is gathering data for a European format. There will be a consultation on a green mortgage definition and there will be a pilot for one year.

Presentation
1B. RENOVATION OF PUBLIC BUILDINGS THROUGH ENERGY PERFORMANCE CONTRACTING

Moderated by Giulia Centi, ENEA

**EPC on public buildings in Piemonte**

Silvio De Nigris – Public Officer, Region of Piemonte

The 2020TOGETHER project aims to start a coordinated action involving regional, provincial and local authorities, financial institutions and local industries/investors and to launch an investment programme based on Public Private Partnerships and Third Party Investment (TPI). Additional activities supporting local industries and investors and coordinated actions with banks and financial institutions to develop financial facilities will be implemented. The project will invest into the energy efficiency refurbishment of more than 60 public buildings and several public street lighting points with an overall investment of EUR 9,420,214 and a leverage factor of 19. In addition, the development of a regional financial scheme using ERDF funds will be explored together with the Region of Piedmont. In this sense 2020TOGETHER represents an ideal test bed for implementation of an innovative approach to energy efficiency investment for the public sector. The outcomes of the project could be applied for other EPC investment initiatives of the province of Torino and expanded to the regional level within the framework of the ERDF programme, thus generating a long lasting effect.

**Presentation**

**EPC in hospitals in Marche**

Cinzia Colangelo – Project Manager, Marche Region

The Marche Region Technical assistance for healthcare buildings Energy retrofit (MARTE) project has a main objective to create innovative financing models and strategies to support energy efficiency investments combining MLEI technical assistance with structural funds (ERDF). The Region Marche intends to give a high priority to energy efficiency in its Operational Programme (OP or POR) and concentrate the 20% of structural funds on energy efficiency and renewable energy sources interventions establishing a guarantee fund and providing grants for buildings energy retrofit. The Region Marche intends to provide MLEI – PDA to mobilise financing for sustainable energy projects in 5 healthcare buildings. The health system in the Marche Region is managed at regional level through the public company ASUR, which owns about 280 buildings. The Region Marche and ASUR, with the assistance of technical experts, will promote EPC model contracts mobilising 15.5 million Euros of investments in healthcare buildings energy retrofitting, in order to reduce the buildings energy demand and create new financing models for energy retrofit interventions. The project will create new business models for energy efficiency interventions that can be replicated in other sectors, in particularly the Region Marche intends to promote a regional discussion with the ESCos and increase the capacity building of the stakeholders and expects to replicate the initiative in the social housing and waste management sectors, Provinces and Local Authorities.

**Presentation**
Renovation of public buildings through EPC in Ljubljana

Alenka Loose – Project Director, City of Ljubljana (Slovenia)

Alenka Loose presented the strategies for renovation of public buildings through EPC in Ljubljana. First, Alenka Loose reminded some context information about the good energy performance of Ljubljana. Indeed, huge investments have already been and are being realised to reach their strategic goals as defined in their Sustainable Energy Action Plan (SEAP) for 2020; moreover they have used all possible financing options besides city budget, notably through the technical assistance ELENA (EIB) for energy retrofit of Ljubljana’s public buildings through a public-private partnership - energy performance (PPP-EPC) contracting approach.

At the moment, the biggest on-going investment project for energy retrofit of buildings in Ljubljana (Slovenia), is EUR 49 of investments in energy retrofit of public buildings and infrastructure were realised within the EOL project, with the help of an ELENA grant (EUR 1 million).

The project faced many challenges:

1) No legal baselines for PPP EPC were available;
2) There were only a few ESCOs present in Slovenia;
3) There was no experience within the local and state administration with the EPC approach;
4) There was no support of the local stakeholders and;
5) A strong intention of local stakeholders to keep the usual practice of public procurement approach.

Alenka Loose tackled each of these specific points and detailed how the project overcame these challenges to become a success.

Presentation

The EPC market in Croatia and the new Eurostat rules on EPC accounting

Ivan Šerić – CEO, Institute for Energy Efficiency (Croatia)

Ivan Šerić gave a useful overview of the EPC market in Croatia, covering the market development and some examples. Then, he mostly touched on the new Eurostat revised guidance has and its potential to be game changing. He then precisely described the key changes and the implications of the accounting rule changes for ESCo market development and for the potential for energy renovations of public buildings; as well as the potential implications on energy renovations of multiapartment buildings and use of EU funding instruments for mobilising private capital in energy efficiency through ESCo market.

Presentation
2A. HOME RENOVATION

Moderated by Adrien Bullier – Senior Project Advisor, EASME, European Commission

It was noted that there are a number of calls for proposals under Horizon 2020 with a deadline on 4 September 2018, which address in particular the development of integrated home renovation services, innovative financing schemes, project development assistance and mainstreaming energy efficiency finance.

Integrated home renovation services in Europe

Françoise Réfabert – CEO, Vesta Conseil Finance (France)

The overview from reviewing a number of homes renovation service projects is that the market is fragmented both on demand and offer sides. There is a need to consider the typology of residential buildings and the lifestyle and circumstances of the householders. Roughly, one should consider that there are two different markets, with different attitudes from customers:

- 9 out of 10 works are single measures, where customers look for easy to implement proposals and don't have specific needs in term of financing: they use their savings and/or personal loans.
- And 1 out of 10 is heavier work, which can be an opportunity to enhance energy efficiency. But there is a need to raise the levels of trust with the supply chain, to bundle works and service payments and to try and identify ways to provide affordable long-term financing. Standard consumer credit loans don't necessarily work for €20-30,000 of works, and this is not necessarily enough for a mortgage loan.

Such services should focus on moments when people may consider a comprehensive refurbishment project: such as when people buy a house. This transaction often takes place in a hurry, but is a key opportunity, and in addition, people are offered a long term financing that can cover both the acquisition and the works.

Many actors have tried to put together the whole value chain, but it has been difficult to see real one-stop-shops emerge due to small margins to be made on individual transactions. Also, linking the renovation offer and the financing offer is not common (unlike for example boiler replacement financing).

Where possible, different sources of finance should be combined, in particular to help meet the cost of advisory services. In some cases, this has been met through white certificate schemes (energy efficiency obligations on energy suppliers).

The public sector has an important role to play in endorsing the quality level of the work and in some cases in developing financial instruments to extend loans adapted to energy-efficient refurbishments (i.e. with long term repayment periods and taking into account the energy savings when assessing the ability of consumers to repay their loan).

There have been particular successes with these kinds of approaches in France. Third-party financing operators bundle advisory and works financing, they follow up on construction quality and the delivered level of energy savings/household energy use. Local authorities are controlling third party financing companies. The Picardie pass (Hauts de France Region, ARTEE (Nouvelle Aquitaine Region) and Energies Posit’if (Ile de France Region) operators have obtained the
relevant banking authority approval. These one-stop-shop operators refinance their activity thanks to credit lines extended by EIB (EIB has set up a 400 M€ programme in order to support third-party financing operators in France) and also have access to technical assistance funding.

The approach being taken is open source, and other projects are joining in with shared tools and approaches to financing etc.

Presentation

Renovating condominiums through energy performance contracting in Padova

Daniela Luise – Comune di Padova & Marco Devetta – Managing Partner, Sogesca

The PadovaFIT project was funded under the Intelligent Energy Europe funding programme and is a consortium of the Padova community with additional private partners. The project is using an ESCo to bring finance and a renovation service offering together for condominiums/multi-family apartment buildings.

The project team wanted to involve a range of stakeholders, condominium owners and associations. It was recognized that there would be many different kinds of barriers and the project team trained facilitators, who were prepared on psychology of decision making as well as technology. Initial light touch energy audits were undertaken as well as residents meetings. This took place alongside more general awareness raising in the city.

Business plans were developed for energy renovation measures for each housing block of interest, explaining How the ESCo approach varied from working with normal condominium management. A financial model was also set out, showing the level of financial return to the condominium at the end of each project.

The municipality carried out the tendering exercise for renovation services, even though it was the ESCOs that were supplying services to a third party. Condominium administrators were often against the idea of energy performance contracting/ESCo services as it was not in line with their traditional models. The city administration also weren't able to crack the challenge of bringing trade associations on board with the approach.

The approach meant that apartment blocks of particular interest could be identified – these were those from the 20th century, with at least 6 homes, with a centralised heating system.

Presentation

Parma home renovation loan

Enzo Bertolotti – Energy Manager, Comune di Parma

Parma’s Sustainable Energy Action Plan was approved in 2014, and this included an action on home renovation, which was then implemented through the Infinite Solutions project funded under IEE. The residential sector accounts for over 32% of CO₂ emissions in Parma. A housing stock model was developed for the city, including different energy efficiency scenarios. This included modelling of social return on investment of possible easy renovation measures and loans. An online questionnaire was also used to identify possible barriers to energy efficiency projects.

There was considerable debate with the treasurer of the municipality. Ultimately Parma asked Emilia-Romagna region to set aside a sum for a guarantee fund. Expressions of interest were
also launched to appoint banks as financial partners to the scheme. One of these removed multi-
family apartments, and one bank came forward and decided to take part.

Cariparma - Crédit Agricole set up a partnership with Parma Energy Agency, with €20 million of
soft loans in up to €50k loans to householders for certain eligible renovation measures. The
energy agency is effectively a surveyor for the bank, who then check creditworthiness and then
works can start.

Results so far are positive, a good network has been established around the project, and there is
lots of interest from condominium owners.

It has though been difficult to conclude the project, communications between the bank and the
municipality were difficult (the project looked at what had happened in this regard in Portugal and
Germany). The project could also be better supported by stable medium term national renovation
strategies and a national communications strategy that brings energy efficiency to the fore and
promotes the idea of the one stop shop.

Presentation

The experience of Cariparma on home renovation loans

Stefano Marlat – Head of Financial Management, Cariparma Crédit Agricole Italia

Although the number of transactions was lower than expected, this scheme is a good idea and is
not yet over. These types of schemes need guarantees in place as they are unsecured credit. The
approval of each project was up to the local sustainable energy agency.

Cariparma also offer loan products to SMEs, but the volume of these is also lower than expected
currently. The feeling is that green bonds are gaining ground. This has been supported by
Quantitative Easing, but this is crowding out private initiatives. Cariparma would like to see a
common definition of a ”green” bond.

In order to improve deal flows, easy access to capital is needed alongside a lean and nimble
marketing process and systems without too much bureaucracy. Ideally renovation schemes
should also be backed by certification schemes.

Presentation

Home renovation through the PACE system - Experience from the USA

Davide Cannarozzi – CEO, GNE Finance

Home renovation can be a difficult process, but there are some encouraging signs and schemes
emerging in the market. There is a need to innovate financing tools and the way that they are
used. Partly, this is a question of changing minds, moving from linear increments to an
exponential increase in renovation rates, in particular given the urgency of climate change.

Property Assessed Clean Energy (PACE) financing is a financing mechanism (through PPP) that
has been using private finance for around 15-20 years, with loans to householders reimbursed by
additional tax charges on the property.

PACE loans can be long term (20-25 years) and connected to the fiscal system, so that if the
owner sells a house with PACE attached, they can decide with the buyer whether to extinguish
the loan. It is also linked to the property, which reduces the cost of financing. Digital platforms are
used to supply information to the customer, with ESCos presenting the offer to homeowners. PACE finance does not affect their personal credit rating.

There are clear benefits for investors, it is a very safe system of funding, the platform is standardised and scalable, it makes use of metered data (so performance data is available and can be linked to finance). The loans can be securitised and issued through green bonds (asset backed securities) – ABS green bonds.

From 2013 to today, PACE has become a $5 billion market, mostly in the residential sector, with some commercial building schemes. It has generated 40,000 jobs, and saved CO₂ equivalent to taking 1.1 million cars off the road.

A European PACE programme is currently in development – EuroPACE, currently an 8 member consortium from four countries. A Pilot project is planned in Spain, to develop a set of procedures and platforms that can then be replicated in other EU Member States. Banks in Europe are starting to express their interest in the project, as well as some institutional investors. In its next phase of activity, the project will be looking for leading cities interested in adopting the model.

Presentation
2B. SUPPORTING THE ESCO MARKET

Moderated by Dario Di Santo – Managing Director, FIRE

The GREPCon tool for standardising energy performance contracts

Paolo Sonvilla – Creara & Chiara Wolter – Ambiente Italia

The GREPCon Tool is a new investment assessment and benchmarking instrument based on the existing Green Rating™ methodology developed by Bureau Veritas, meant to support the development of EPC opportunities. Due to its standardised and certified approach towards building representation and modelisation of over 40 technical energy saving and generation measures, the GREPCon tool fosters a common understanding of EPC project risks and benefits, thus improving transparency and trust in the potential returns among all investment stakeholders.

Presentation

The eQuad online platform for project valuation

Jessica Stromback – Chairman, Joule Assets Europe

eQuad online aims to bridge the remaining critical financing gap, in particular for small to medium energy efficiency projects. In order to do so, eQuad combines four elements:

1. Independent project valuation by Joule Assets Europe
2. Project standardization protocols from the Investor Confidence Project (ICP)
3. Performance insurance prequalification from HSB Engineering Insurance
4. Project developer/investor matchmaking services

This robust combination empowers ESCOs to access finance and supports them through this end-to-end turnkey process.

Presentation

Mediocredito Italiano credit line for ESCOs

Giuseppe Dasti – Coordinator Desk Energy, Mediocredito

Giuseppe Dasti illustrated the typical methods of credit approach to energy efficiency projects: the "corporate approach" where the bank directly finances the energy company and the "project approach" where the bank finances the ESCOs.

The presentation also provided some examples of projects financed for ESCOs. In order to better assist companies investing in energy efficiency, Mediocredito Italiano (bank of the Intesa Sanpaolo Group) has activated a loan facility at subsidized rates with the European Investment Bank.

Presentation
ESCO certifications under Comitato Termotecnico Italiano

Ettore Piantoni – Consultant Team Leader, Consultant Energy Management

Ettore Piantoni presented the current landscape of ESCO certifications, the role played by Energy Efficiency standards for sustainable financing and in particular the work lead by Comitato Termotecnico Italiano.

This presentation was articulated around four main observations:

1) In an energy efficiency improvement project, the value is generated with the energy audit and captured with the measurement and verification plan which determine the cash flow.

2) Standards are de risking tools for energy efficiency project financeability. Standards enhance technology while reducing technical and economical risks.

3) Standards for energy efficiency, energy management and ESCO certifications have proven a positive impact on market growth.

4) To support a sustainable finance of energy efficiency project it is essential the engagement of all market actors (energy service providers, financial institutions, technology providers) to a standardized and shared end to end process, that value and measure all the multiple benefits.
CLOSING PLENARY SESSION

Moderated by Dario Chello – Head of Unit European Union and International Organizations, ENEA

Short report from the parallel sessions by moderators

Moderators highlighted the following points that came out of the breakout sessions.

1A - Making energy efficiency attractive for the financial sector

1. Toolkits, standards and benchmarking data are useful to increase knowledge and build up stable credit processes (for many different projects) to increase finance for energy efficiency within banking organisations – to improve processes in banks.
2. Creation of credit scoring models for green projects. Definition of and sharing of models is important – use them for the relationship with banking authorities, they will only be widely adopted once such approaches are approved (by the banking authorities).
3. Demand stimulation, including among citizens – Need to streamline incentive bureaucracy, and reducing credit risk (by reducing amount of money required from banks), for instance on being clear where non-bank financial support/incentives may be available.

1B - Renovation of public buildings through energy performance contracting (EPC)

1. There is a need for a typical or standardised EPC contract, this would avoid a lot of bureaucracy. While certain parts can be standardized, there is a need to give freedom for contracts to be adjusted to the reality of each project.
2. The code of contracts needs to be addressed, in particular its provisions on the level of design. This code includes certain constraints and requirements, including disallowing integrated contracts.
3. It is necessary to have guarantee funds in place, or to make use of structural funds, in particular for large projects. Databases and information provision are also important, in particular to help with baselining and benchmarking of projects.

2A – The Residential Sector

1. The residential sector is like Cinderella waiting for the ball. We need to find more concrete solutions, we can’t rely on magic wands.
2. Solutions are being sought, and those active in this market are trying to attract solutions from banks, ESCOs and property owners.
3. New solutions to explore include drawing on examples from Picardie in France, using energy performance contracting on condominiums (as in Padova) and the use of PACE mechanisms as these develop in Europe.

2B Supporting the ESCo Market

1. ESCOs are important players in facilitating funding for Energy Performance Contracts in buildings. A series of key barriers to market development were identified, including; small project size, long payback projects and end user/borrower creditworthiness.
2. We need a common language between all stakeholders and greater standardisation.
3. From the point of view of investors, banks continue to consider creditworthiness to give loans irrespective of the presence of an ESCO. More stringent rules would govern banks conduct in future and risk sharing facilities do not wholly overcome this issue. There should be Europe wide rules to overcome this.
Reaction of the panellists

Gabriele Moggia – Consumer Finance, Am, Bancassurance, Banco BPM
Green loans are an interesting product. Noted that in the Parma and Credit Agricole examples, that products were prepared by the banks, but that transactions were not so frequent.

Jessica Stromback – Chair, Joule Assets Europe
We often think about the building renovation industry as if it was technology or environmentally driven. Successful businesses though are sales and communications driven. For these types of events, half of the speakers should be salespeople and we should be looking at how deals are packaged and promoted. In the end, the end user is hardly ever buying energy efficiency, they’re buying “cool”. Finance often just packaging, successful schemes put the pieces together and make it seem like one cool thing. It is not a question of project size, but a question of focus or direction, that’s the difference between success and failure.

Antonio Ciccarelli – CEO, Servizi Energia Ambiente
The problem is in putting together something simple, in particular in residential buildings, something that works for a non-expert. We have to come up with solutions together for residential properties. There are simplifications to the Italian market that would help, including allowing the transfer of tax credits from householders and businesses direct to banks (which is not permitted currently).

Angelo Peppetti – Director of Strategy and Financial Market, ABI
Italy is feeling the impacts of climate change, on water, in the changing seasons, in wine production, this means it is more than just an energy efficiency issue. The theme has to do with the economy at large. Creating new financial products needs proper oversight. Incentives can also be non-monetary for banks, including flexibility on risk and capital requirements. Green factors are fundamental. ABI have started a fund raising initiative and there is a working group in Italy to assess riskiness of these types of investments. The banking industry also want to support green mortgages and new sources of funding are being explored for home renovation loans.

Mauro Mallone – Head of Energy Efficiency unit, Ministry of Economic Development
It is encouraging to see the energy efficiency market developing in Italy. We need to remove barriers that are a hurdle to growth, such as (as noted above) the transferability of tax deductions in retrofit interventions. In other sectors, there is a need to stimulate demand, for example by training of public administrations to raise awareness of energy saving opportunities. The 2013 regulation on heating was a great stimulus for the energy efficiency market.

Claudia Canevari – Deputy Head of Unit for Efficiency, DG Energy, European Commission
We are trying to put together many different stakeholders, all of whom play an important role in to improving energy efficiency action. Building renovation is important if Europe is to deliver on the Paris accord commitments and targets for 2030 and 2050. Once you have the legislation and programmes, these need to be put into place. If we fully understand the role of energy efficiency within this framework, then we can make it relevant to all.

We would like to follow up with a National Roundtable in Italy. There is also scope to contribute data from existing projects to the DEEP platform. Work goes on on the regulatory front as well. Long-term Roadmaps for building renovation will take this area of activity forward and may be made stronger at the end of forthcoming Energy Performance of Buildings negotiations.
The European Commission is keen to support one stop shops and technical assistance. To that end, the amount of funding in ELENA is being increased and there may be additional funding for one-stop-shop solutions.