EmBuild

How to Improve Investment Climate at Local Level

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Introduction 1

This report presents possible measures for improving the investment climate at local level. It includes measures of a more general nature as well as country-specific recommendations. The main objective of this document is to present existing and/or innovative approaches/mechanisms/scenarios for active involvement of stakeholders at public level and to facilitate and stimulate application of such measures in practice. The focus of EmBuild lies at the local level. Thus, measures are identified with a distinct local (municipal) and regional (county or district) application. This report is based on the findings and conclusions from work packages 2-4 of the EmBuild Project:

- Work Package 2 Inventory of the building stock and stakeholder involvement: Deliverables 2.1 Instruction note on stakeholder categorization and involvement; 2.2 Communication Plan; 2.4 Guidance note on stakeholders' involvement; 2.7 Comprehensive Report
- Work Package 3 Cost-effective approaches to renovations: Deliverables 3.2 Catalogue of low- and no-cost measures; 3.4 Standardised report for detailed analysis of buildings
- Work Package 4 Policies and measures to stimulate cost-effective deep renovations of buildings: Deliverable 4.1 Report on barriers to deep renovation for each participating country

This report captures knowledge collected and generated during project implementation so the results and products of the project are made available and disseminated to stakeholders and to the widest possible relevant audience to maximise the project scope and impact. The conclusions and recommendations in this document will also serve as guidance to increase capacity of public authorities to attract and absorb investment in resource-efficient processes and actions, particularly in deep renovation/energy efficiency measures in public buildings.

Project Brief

EmBuild - Empower public authorities to establish a long-term strategy for mobilizing investment in the energy efficient renovation of the building stock - is a project financed under the Horizon2020 Programme of the European Union, and explores the modalities of investment in energy efficiency in public buildings with special emphasis on local level. Its main objective is to empower public authorities at local, regional and national level, to formulate renovation strategies for the building sector that foster deep renovation and facilitate the acceleration of the renovation rate. The project involves 10 partners, two of which are with regional or international mandate (NALAS and BPIE), and 8 national partners from 6 countries: EnEffect (Bulgaria), REGEA (Croatia), GIZ, eza!, Technical University of Munich (Germany), AE3R (Romania), University of Belgrade (Serbia) and KSSENA (Slovenia).

The project results will contribute to increase capacities at municipal level to formulate policies and measures to stimulate cost-effective deep renovations of buildings and to guide public investment decisions, inclusive of capital investment and facilitation of private sector involvement.

Investment in deep renovation in buildings will help reduce unnecessary energy consumption, will improve security of energy supply and will decrease greenhouse gas emissions at local level. The targets and indicators for energy efficiency in buildings prescribed by the EU directives will be hard to achieve without investment in renovation as buildings account for 40% of the energy consumption in the Union[1]. 75% of existing buildings in the EU were erected in past periods when there were no or minimal energy-related building requirements, and as long-term assets are expected to remain useful for 50 or more years; 75-90% of the buildings existing today are expected to be still in use in 2050. With low demolition rates (0.1% per year), low renovation rates (1.2% per year) and transition to highly energy efficient newly-build (1% additions per year), it is imminent that investment in energy efficiency in buildings will concern measures for energy efficient renovation in the existing buildings stock in the EU.[2]

Currently, the economic and environmental potential of renovating the European building stock is largely underexploited. Private investors hesitate for a myriad of reasons: the benefits[3] of energy efficiency measures in buildings is not well articulated, is not advised as a priority, or is weak in evidence when presented to key stakeholders; there is lack of reliable/standardised data that can be used in rationalising investment; there are no unified standards for the elements of energy efficiency investment process; key stakeholders such as public and private building owners are not familiar with appropriate data that will enable them to initiate action in direction of investing in energy efficiency; access to funding, including investments through public-private partnerships, is difficult and requires specialised expertise and time and human resources; available funding from the European Structural and Investment Funds or public financial institutional schemes are under-utilised or not utilised at all[4]. Other obstacles to investment in energy efficiency in buildings may be the "split incentives" where the investment benefits go to the user of the building not its owner. It can be related to the buildings owned by the local governments when the municipality invests in energy saving measures and the budget transfers decrease proportionally with the savings expressed in financial means.

Commonly agreed procedures and standards for energy efficiency investment are best developed at national or continental level. But to really start projects, close cooperation at local level is needed. Guidance is needed to increase capacity of public authorities to be aware of energy efficiency in general, of the benefits in investment in energy efficiency measures so to attract investment in deep renovation and energy efficiency measures in buildings. It is also important that all policies related to investment in energy efficiency in buildings are lead in accordance with the good governance principles of efficiency, accountability and transparency. Awareness raising for general public is also necessary, for two reasons: the investment uses public funding and resources, and every local policy/intervention in deep renovation in buildings requires strong support from the citizens for them to be successful.

This document is meant to guide personnel involved in the whole cycle of energy efficiency interventions with different roles in decision making and implementation practice. To address different aspects of awareness raising at local level, the guidance is divided thematically in the following chapters:

1. Coherence between NEEAPs and SEEAPs/LEEAPs.
2. Planning and directing interventions on public building stock and private housing.
3. Attracting investment in deep renovation of public buildings and housing.

1 Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the Energy Performance of Buildings. Retrieved from: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0031&from=EN

2 Energy Efficiency Financial Institutions Group Final Report (2015). Retrieved from: http://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report%20EEFIG%20v%209.1%2024022015%20clean%20FINAL%20sent.pdf

3 I. e energy savings, productivity increases, health benefits, acoustic benefits, social and environmental benefits and the many other case-specific multiple benefits of energy efficiency. IEA. (2012). Spreading the Net: The Multiple Benefits of Energy Efficiency Improvements. Retrieved from: http://www.iea.org/publications/insights/insightpublications/Spreading_the_Net_FINAL.pdf

4 Energy Efficiency Financial Institutions Group Final Report (2015). Retrieved from: http://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report%20EEFIG%20v%209.1%2024022015%20clean%20FINAL%20sent.pdf

The aim of the document is to contribute to increasing capacity of public authorities at regional and municipal level to guide (public) investment decisions and to facilitate private sector involvement. The document is intended to help representatives and practitioners from local governments who include:

- Decision makers (mayors, municipal council members, city managers, executives of local utilities) at local and regional level in whose competence is to take decisions related to or influence local energy policies, energy efficiency strategies and their implementation and are accountable to the citizens they represent; they also plan and allocate budgets for the interventions on behalf of the body they represent;

- Municipal practitioners operating in the area of municipal budgeting, local energy managers and energy agencies' offices who provide the expertise and technical support in formulating, implementing and monitoring and reporting local energy saving strategies. On the assertiveness and communication skills of these experts may depend the confidence of the decision maker over the pursued measures.

- Local government associations as they are a legitimate interlocutor between central and local government, participate in the legislative process, represent the interests and provide guidance for their members – the local governments;

- Other bodies or individuals who are involved in facilitating energy efficiency measures in renovating public buildings such as energy agencies and independentenergy efficiency professionals.

This report uses findings and conclusions from work packages 2-4 of the EmBuild Project:

- Work Package 2 "Inventory of the building stock and stakeholder involvement":
  Deliverables 2.1 Instruction note on stakeholder categorization and involvement; 2.2 Communication Plan; 2.4 Guidance note on stakeholders' involvement; 2.7 Comprehensive Report

- Work Package 3 "Cost-effective approaches to renovations": Deliverables 3.2 Catalogue of low- and no-cost measures; 3.4 Standardised report for detailed analysis of buildings

- Work Package 4 "Policies and measures to stimulate cost-effective deep renovations of buildings": Deliverable 4.1 Report on barriers to deep renovation for each participating country

Improvement of the quality of service of the information provider

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Local energy agencies and info points play a significant role in informing citizens, the local authorities and SMEs on energy efficiency issues, including financing for energy efficiency measures. Some of them were established with the help of EU funding under the Intelligent Energy Europe Programme. Collaboration with and communication from and to the energy agency is one of the key terms for the quality of service they provide.

In the assessment for the Review of Successful Examples it is indicated that "a forward looking perspective to guide investment is missing". This raises the question if and how the local energy agencies can fill the information gap for guiding the investment in energy efficiency in collaboration with stakeholders and how to stimulate such dialogue, as well as how this can be transformed into warm local investment climate.

Some of the partners of EmBuild Project Consortium are in fact or fulfill to some extent the function of energy agency and their practice can be used as good example or learning cases.

REGEA experience (Croatia):

North-West Croatia Regional Energy Agency - REGEA was established by the City of Zagreb and three neighbouring counties - Zagreb, Karlovac and Krapina-Zagorje in 2008 within the framework of the Intelligent Energy Europe Programme. Our scope of work includes providing information, education and promotion of energy sector´s best and brightest examples, support in the development and implementation of national, regional and local energy plans and programmes, energy audits and certifications, energy performance contracting and public private partnerships.

Best practice examples from Croatia

Since Croatian market wasn't familiar with biomass heat contracting model, REGEA decided to conduct the pilot project to boost the biomass market. Public building "Craft center Karlovac" was selected because REGEA's regional office for Karlovac County is located within the center. The building was heated with oil boiler so REGEA suggested reconstruction of boiler room, installation of pellet system and heat supply for the next 10 years. The contract was signed with the owners of the center in 2013. At the same year the main concept design was made and the project was successfully applied for funding on Environmental Protection and Energy Efficiency Fund call. In 2014 public procurement for works was announced and the new system was put in motion just before the new heating season. The system was equipped with 3 calorimeters for consumption metering of each of the 3 owners. Besides that, every room that has heating element is equipped with heat cost allocators for establishment of consumption-based billing since lots of offices in the building are rented.

Market response to a new business model was better than expected and in 2016 two new projects were implemented. Karlovac County and REGEA prepared public procurement for biomass heat contracting in two Karlovac County primary schools which were using fuel oil for heating. The criterion for selection of contractor was the lowest price of the heat energy. After the selection of contractor the projects were successfully applied for funding on Environmental Protection and Energy Efficiency Fund call. Based on a ten year heat supply contract the contractor had to install biomass woodchips boilers in both schools, operate and service boilers, supply with fuel and secure safe energy supply. The core business of the contractor is woodchips production which is mostly being exported to neighboring countries and with these projects he has achieved much bigger price for his product.

REGEA is in constant contact with its founders and local governments and provides them with all the necessary information related to the implementation of energy efficiency measures. All the necessary information about the current calls for the implementation of energy efficiency measures as well as other sources of financing may be explained at the Agency.

Energy agency KSSENA (Slovenia)

Energy Agency KSSENA was established in 2006 within the framework of Intelligent Energy Europe (IEE). Its founders are the Municipality of Velenje (MOV), Municipality of Celje (MOC), Municipality of Slovenj Gradec (MOSG) and Public Utility Company Velenje (KPV). Subsequently we have official duties for reporting and informing our founders about: (i) our work and development, (ii) developments in national legislation and regulation, and (iii) international guidelines and frameworks on the field of RES and RUE. Annually we present all mentioned in the municipal or city council, and we organize at least one conference per year where our founders get significant information on informal way.

Regarding citizen involvement, we are working on several EU financed project, focusing on primary and secondary schools in our regions. In past two years, more than 500 pupils and 100 teachers (or other school workers) were actively involved in recognizing and developing energy efficient behavior. Consequently, whole schools starts to act energy efficient, promoting and rewarding energy efficient behavior. We prepared special program for kindergartens as well.

On national level, energy-counseling network for citizens (EN.SVET) operates and offers free of charge information about RES and RUE.

For other stakeholders in public and private sector, KSSENA, with cooperation with other agencies, clusters and associations, organize several seminars, workshops or similar events where we shared respective knowledge and up to date information.

eza! experience (Germany)

Energy-alliance in the county Oberallgäu (Energie-Allianz Landkreis Oberallgäu)

In 2013, the county of Oberallgäu - in cooperation with the local energy agency eza! - set up the energy alliance for the 26 municipalities in the county Oberallgäu. The county offered some services to the municipalities if the "signed" the energy alliance. The services for the municipalities aer frequent information on issues related to energy (e.g. regulations and subsidies), training for the caretakers of municipal buildings (2 training days per year), the possibility to use an online monitoring system for municipal buildings and additionally a yearly benchmark on energy consumption of buildings. In return, the municipalities are obligated to announce a person responsible for energy, offer energy consulting for their citizens. This alliance is an offer with a low threshold - most of the 26 municipalities in the county of Oberallgäu joined. With the energy-alliance, the constant contact and periodic information of the municipalities is established and ensured on a long sight.

The eza!-Partner network

As a sort of “yellow-pages”, eza! established a network for experts and companies that work in the building sector. Amoung the partners are architects and engineers, craftsmen and SME`s like manufacturers of building materials or building technologies. The aim of the network information an quality management. Each year, the eza!-partners meet four times for lectures, workshops and exchange of experiences. Another important instrument of the quality management is the feedback of costumers - the costumers can rate the quality and their satisfaction.
The partner-network is a good and established instrument for information and capacity building amoung local experts and businesses.

Findings from the public consultations

During the public consultation of the EmBuild project, where 10 - 12 representatives of municipalities (mostly from the county of Oberallgäu) attended, the issue of a network came up. There was strong demand for information about changes in legislation and regulation as well as information about subsidies for municipal buildings. A network of responsible persons for municpal buildings could also be a good platform for the exchange of experiences. The responsible persons in city administrations a confronted with similar questions and there are many options to learn from the success and failures of others. As a consequence of this demand, eza! plans to establish a network for responsible persons in municipalities (energy managers of municipalities > 20.000 - 30.000 inhabitants).

AE3R Experience (Romania)

The Energy Efficiency and Renewable Energy Agency "AE3R Ploiesti-Prahova", through its experts, councils and helps local public authorities in elaborating the Plans for Improving Energy Efficiency, by making energy audits for the public buildings and feasibility studies for implementing systems that use renewable energy sources.

AE3R Ploiesti- Prahova has members which are important players in the energy field.
Organizing workshops, conferences, seminars, webinars at which decision makers from the local, regional and national level are invited, where the following topics are debated: potential projects for reducing the energy consumptions for the public buildings, existing budgets at the local public authorities level, modern technologies for improving Energy Efficiency, Energy Performance Contracts as an instrument for the rehabilitation of the public buildings.
Periodically the Prahova County Council organizes workshops with the local public authorities in the county, on different topics, at which AE3R Ploiesti-Prahova is permanent invited to present updated information regarding the funds for improving Energy Efficiency for the local public authorities, the legislation in effect regarding the tendering and acquisition procedures, Energy Efficiency success examples for public buildings.

On the AE3R website, the interested stakeholders can find maps of the regional potential of the renewable energy sources (solar, wind and hydro).

Experiences from Bulgaria (EnEffect)

The Bulgarian National Programme for Energy Efficiency of Multifamily Residential Buildings is in implementation since February 2015. It is the biggest social initiative in Bulgaria for many years now. Starting with some distrust among the citizens despite the proposed 100% grant, 22 months later, in January 2017, projects in more than 200 buildings are already implemented and the renovations, that have already started, are more than 500, and more than 2,000 have already signed framework agreements for financing. The expected energy savings for all buildings of which energy audits have already been carried out amount to a total of more than 900 GWh/annually. The interest of the citizens seeing the implemented projects in buildings near their homes is growing and the number of the applications submitted for funding under the programme already has exceeded 4,000. It could be said that the first stage of the program has played its most important role - to trigger enthusiasm and kind of competition between the condominiums. There are serious prerequisites to consider a long-term and comprehensive national program for renovation of the existing residential building stock.

However, the success of the Programme is much different in any municipality. The municipalities are the main driving force in the implementation process. Municipalities are responsible for the overall organization and control of the implementation of all activities staring from the consultation of the citizens and finishing with the commissioning of the construction works and payments to the stakeholders involved. In general, where local governments have given the highest priority of the execution of the Programme, activities have already been implemented or are in process of implementation in many buildings. Besides the organizing of the tenders for selection of different service-providers, contracting and controlling the execution of the contracts probably the most important role of the municipalities is in the beginning of the process when direct work with the citizens has turn out very crucial for the success on the local level. The municipalities has overcome the initial disbelieve not only by organization of an municipal informational event and providing information in the local media but also by direct visits to the buildings, participations in general assemblies of property owners, full support to the citizens in preparation of the necessary documentation for registration of Household Associations and for application to the Programme. Some municipalities has even employed additional specialists or has opened temporary consultation bureaus in different districts of the cities to help the people in their application. During the implementation phase municipal officers are staying in constant close contact with all involved stakeholders to take into account any meaningful note, to explain any misunderstanding or to solve any rising conflicts by different parties.

2.1 Recommendations on improvement of information flow between municipality and private sector

Municipalities play a major role in the development of energy efficiency markets. As owners and operators of municipal services and infrastructure, they are important potential investors in energy efficiency projects. Very often they are in the best position to play a leading-edge role for EE projects at local level. The local governments are also principal players in the development of favourable market conditions for public and private investors, as well as for providers of products and services. Awareness raising of local potentials and benefits of energy efficiency and deep renovation of public buildings, development of local capacities and infrastructure, demonstration of energy efficiency applications, provision of administrative support for energy efficiency projects and the integration of energy efficiency measures and deep renovation of buildings into urban development planning, are some of the municipalities' most important contributions to the development of energy efficiency markets. In this line of thoughts, the quality information flow between the local governments and the private sector is of utmost importance for investment in local energy efficiency and deep renovation projects.

To begin with, the presence of well rationalised and developed local energy action plan (LEAP) is a very much desirable condition for setting the strategic landscape for energy efficiency interventions at local level. A good LEAP defines the needs, priorities, objectives, and timeline for longer-term investment; it also helps businesses plan ahead and adjust their market plans and adapt their products to the local demand. The LEAP should be also communicated to the public, and the benefits of implementing it like environment protection, health benefits, improved wellbeing, etc. should be in the focus of information campaigns that promote energy efficiency and deep renovation in buildings.

Also, it is very important for the municipality to have accurate and exhaustive documentation for the properties that are subject of investment. Unclear building ownership, informal/not legalised buildings, lack of GIS and incomplete spatial plans are big obstacles for the municipality to attract investors. In this sense, the inventory of public buildings and public availability of this data can be a positive step towards improving the information flow towards the private sector.

For the elaboration and implementation of energy efficiency projects, private companies require information on available investment locations, documents on development plans, urban regeneration plans or spatial planning documents as well as information on cost of doing business (for example, purchase of public procurement documentation, local licences, taxes and fees). Further, more specific documentation concerning the companies implementing energy efficiency or deep renovation projects in buildings is technical documentation (construction and/or technology documentation), as well as data on energy consumption. It is also important the municipality to be able to provide to potential investors information on local SMEs that can be engaged in partnerships for implementation of deep renovation projects (suppliers, manufacturers, recruitment agencies, etc.).

The municipality should clearly define and articulate the incentives that it offers to private businesses. Having in mind that most of the municipalities, especially the smaller ones, do not have or have limited possibilities for financial incentives, there are also other than financial ways to incentivise the investors (the list is not exhaustive)[5]:

- Technical assistance to investors, for example accelerated procedures for issuing building and other permits necessary for the implementation of the investment project
- Workforce development services.
- Tax recovery, grants, direct payment subsidies, energy audits are provided, voluntary labelling programs (green building, energy star, zero energy, etc.),
- Investment mechanisms such as public-private partnerships and Energy Savings Companies
- Other, tailored support provided to investors includes provision of land, infrastructure, services per request, human resources and facilities.

The municipalities can announce their plans for investment in deep renovation in public buildings through various information channels.

[5] Same source.

Attracting investment 3

Attracting investment is vital for local plans for deep renovation in buildings. There are many sources that may be of significant support to the local government to guide and finance its own investments in energy efficiency in buildings. The sources of financing can be private, like, for example, joint ventures in Energy Savings Companies (ESCOs) or Super-ESCOs[6] where the owner of the company is the municipality itself, or can be from EU funding or own funding, or combination of the two.

Having a local energy efficiency action plan or equivalent with clear justification, targets, timeframes and allocated own municipal budget, at least for achievement of part of the targeted results, demonstrates commitment and serious political will for deep renovation interventions at local level.

Having inventory of all local buildings that need renovation, with rationale and calculations behind, as well as investment plan, helps immensely to attract investment. Coming from experience in the project territory, the more advanced the technical programme/renovation projects, the more likely is them to receive financing as the donors often do not finance the elaboration of the technical project part.

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Active search for suitable EU or national, where relevant, calls for proposals, and application through dedicated staff, active traditional and new for the municipality project partnerships open opportunities for grants or for renovations that are partly financed by regional or European funds. Several examples can be cited with opportunities for both EU member states and candidates and potential candidates:

Allocation of resources, especially financial, for deep renovation measures in public buildings each year will repay itself and the effects will be visible for the building occupants and users. This is especially important for smaller municipalities where the number of public buildings is low. In these cases it may be an opportunity for smaller domestic investors to apply as and they may not operate on larger scale and can be more flexible, and will most probably use local labour.

Intergovernmental cooperation should be encouraged and nurtured, especially between municipalities because it provides opportunities for joint application to projects and investment. This is especially important for smaller municipalities who may be not so attractive for investment individually because of small public building stock. If the investment is for several

6 Please look at: https://www.researchgate.net/publication/225523089_Scaling_up_energy_efficiency_The_case_for_a_Super_ESCO

7 How to Improve Investment Climate at Local Level, EmBuild, 2017

8 Same source.

municipalities at the same time, the chances of attracting it increases. Especially for smaller municipalities, it is more cost-effective to cooperate in applying energy efficiency measures for deep renovation in public buildings for two reasons: decreased administration costs for elaboration and implementation of the local energy efficiency action plans, and lower cost of the intervention as the principles of economy of scale are applied.[9]

The case of Bogdanci, Valandovo and Gevgelija (FYRO Macedonia):

Following the recent decentralization process in FYRO Macedonia, the local government units are now legally responsible for taking energy efficiency measures and face high obstacles, particularly for smaller, rural municipalities with limited resources.

Through a UNDP-supported programme, municipalities pool resources to implement concrete energy efficiency measures, resulting in reduced costs and better quality of services provided.

In 2011, UNDP began working with national and local partners to pilot inter-municipal cooperation for energy efficiency. The initiative brought together the towns of Gevgelija, Bogdanci and Valandovo that have 45,000 residents between them. The three municipalities pioneered the use of expertise and specialized equipment to implement energy audits within the municipal structures.

For the first time, public buildings were audited, and the municipalities of Bogdanci and Valandovo used this information to develop their first energy efficiency programmes and annual action plans. Gevgelija brought its existing programme into compliance with the Law on Energy, and so avoided the costly practice of hiring private companies for audits. Eight of the nine municipalities in the Vardar Planning Region embarked on inter-municipal cooperation for energy efficiency. By the end of 2012, they had set up a joint administrative unit and information centre.[10]

It is also possible to build local teams that can respond to demand for application for EU or International Financing Institutions. These teams can be flexible in their composition of staff (each person competent either in finance or energy efficiency or EU projects and programmes or other relevant expert field). These teams can be also result of intermunicipal cooperation where several municipalities apply as project consortium, or the team provides its services on demand to each of the local governments that nominated experts in it.

Legislative environment should be consistent and predictable, and it is in the mandate of the local government associations to negotiate with the central governments and participate in the legislative process as representatives of local authorities. It is especially important when it comes to rules and procedures for public procurement and public private partnerships. If the legislation is too difficult or complicated to implement or the changes in regulations are too frequent, or both, there is higher risk of improper procurement procedures at local level and also risk of corruption. The decision makers and the municipal technical and financial staff who prepare and implement the procurement procedures should be regularly trained and updated with the latest changes in relevant legislation.

The role of local government associations is to represent their members – the local governments – and within their mandate is to assist with promoting investment opportunities, to enable links with other municipalities for project partnerships. The local government associations also negotiate with local governments and participate in the legislative process on their behalf, and later provide trainings for decision makers and municipal staff in implementation of that legislation.

Strong support for the municipal energy efficiency policies and projects should be nurtured and demonstrated to potential investors. Aware decision makers, and ambitious goals, existence of LEEAP, well organised structures and commitment of resources for the implementation of the LEEAP are strong signals in this direction.

[9] Retrieved from: http://justicia.mk/upload/ckfinder/files/%D0%9C%D0%B5%D1%93%D1%83%D0%BE%D0%BF%D1%88%D1%82%D0%B8%D0%BD%D1%81%D0%BA%D0%B0%D1%82%D0%B0%D1%81%D0%BE%D1%80%D0%B0%D0%B1%D0%BE%D1%82%D0%BA%D0%B0 %D0%B2%D0%BE %D0%A0%D0%B5%D0%BF%D1%83%D0%B1%D0%BB%D0%B8%D0%BA%D0%B0 %D0%9C%D0%B0%D0%BA%D0%B5%D0%B4%D0%BE%D0%BD%D0%B8%D1%98%D0%B0 - %D0%9E%D0%B4 %D0%BD%D0%BE%D1%80%D0%BC%D0%B0 %D0%B4%D0%BE %D0%BF%D1%80%D0%B0%D0%BA%D1%81%D0%B0.pdf

[10] Retrieved from: http://www.undp.org/content/undp/en/home/ourwork/ourstories/fyr-macedonia--municipalities-cooperate-on-greener-energy-manage.html

General and country specific guidance for municipalities on how to raise awareness to attract investment

4

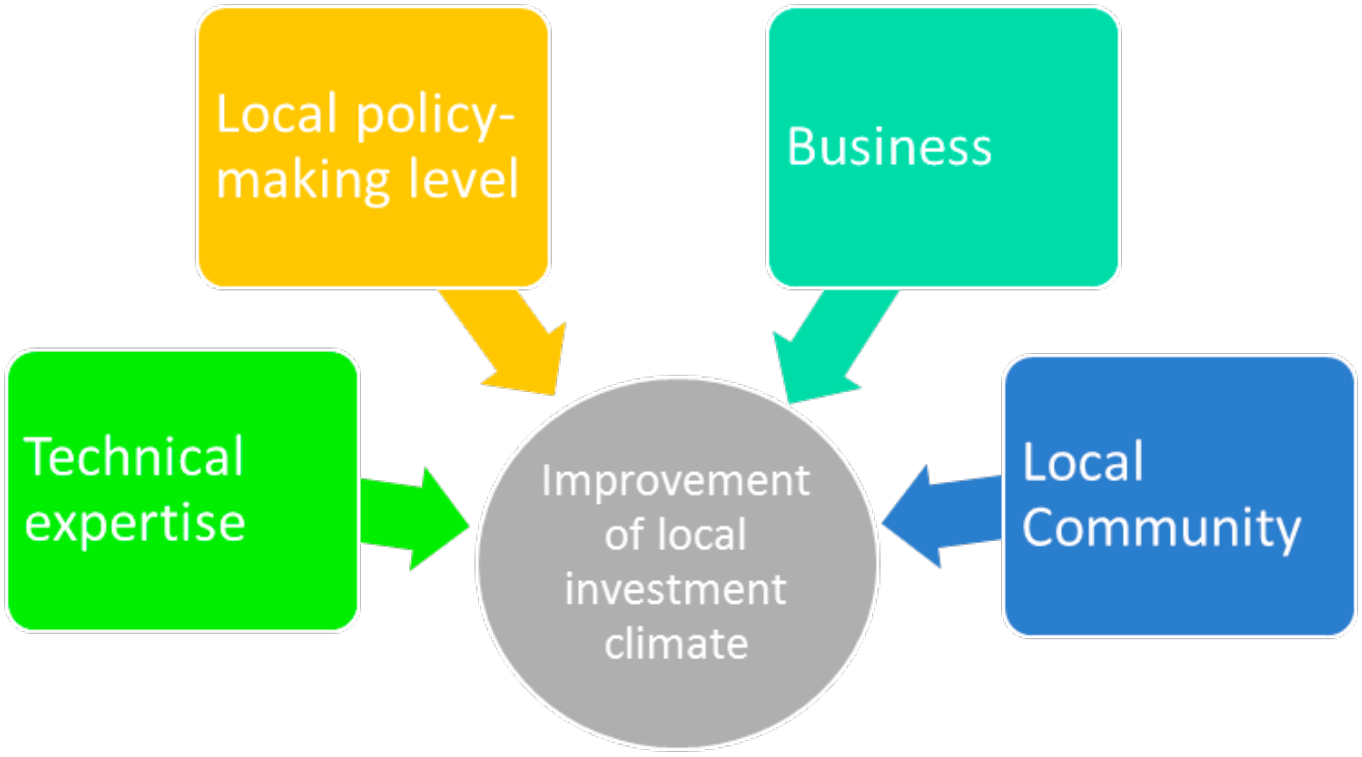

Figure 2. Contributors to local investment climate.

First and foremost, level of awareness on the importance of energy efficiency measures of mayors, city managers and other decision makers is of utmost importance as confirmed by numerous interactions between NALAS and its Task Force on Energy Efficiency. Awareness raising measures can and should be addressed from the very top (international treaties, national laws) to the bottom (municipal council decisions).

From a regional point of view, one field of intervention would be to recommend including the local government dimension in international treaties and programmes. As an example, the Energy Community Treaty does not have a special unit or does not streamline local energy issues. As it is a treaty between governments, it sets national targets in NEEAPs concerning national priorities and often the local energy action plans are not or are little connected to them. Similarly, the indicative targets and binding obligations of the Energy Efficiency Directive are laid down for central governments with a number of references to the regional and local level. The local government dimension in international strategies and treaties should be also enabled by specially designed programmes and instruments for local governments, as well as sufficient funding allocated for their implementation. These concerns should be the entry point for participation in policy-making and lobbying at EU level.

One possible way of influencing the policies is to involve the local government associations in the process. The local government associations within their mandate are the interlocutor between the central and the local governments, and participate in the preliminary debates and legislative process for introducing laws.

Here are some ideas to raise awareness on energy efficiency:

a) Increase political and public awareness of potentials and benefits of energy efficiency (EE) application at local level:

- EE projects in schools, hospitals, public institutions and residential buildings may have a particularly high impact on public education and awareness raising. Such actions provide quick and visible for the general public effects but also creates public demand for such interventions that may push the decision makers to enable more such actions.

Energy Efficiency awareness raising in practice: a case from Bosnia and Herzegovina

The Sports Hall in Kresevo

A small intervention in the Sports Hall of the Kresevo in Bosnia and Herzegovina went a long way in convincing both the decision makers and citizens in energy efficiency measures impact. Replacement of thermal insulation of external walls by installation of 8 cm polystyrene, EPS layer (952 m^2) and replacement of thermal insulation of external walls along the ground by installation of 5cm polystyrene, XPS layer (112,5 m^2) was enough to reduce heat losses through the exterior wall with 80%. Before the renovation, the children played in the sports hall wearing coats (!), after it, a normal learning process was enabled and everyone, including parents, was aware what energy efficiency meant and about its impact. The project created demand for further actions related to renovation of public buildings in the municipality. The renovation was financed by EeMA Project funded by GIZ.

- Disseminate information on good practice of EE applications from other municipalities thus creating demand for local policy level measures, as well as a sense of competition between the local governments and peer pressure.

Figure 3. Local Energy Efficiency Charter that was signed by more than 50 cities in Serbia

During 2013 with the support of UNDP Serbia the Standing Conference of Towns and Municipalities (SCTM, the local government association of Serbia) conducted a series of four regional energy efficiency forums with aim to raise awareness about energy efficiency with the local decision makers. Outcome of these activities is 50+ municipalities signed Local Energy Efficiency Charters.

This initiative was carried out in line with the joint aspirations of SCTM and UNDP within the scope of the Project "Energy Efficiency Awareness Rising for Decision Makers at Local Level in Serbia". Project goal was to contribute to level of awareness of local decision makers about issues related to energy efficiency in order to have more political backing for local energy policies and thus for local actions in the field of rational use of energy. One of the important part of the Strategy was the design of Local Energy Efficiency Charter.

Currently with the new UNDP project which supports the introduction of energy management system in Serbian cities and municipalities initiative with the Local Energy Efficiency Charter is renewed.

- Awareness raising campaigns should be based upon target-group specific argumentation (e.g. focusing on environmental concerns for educated or affluent target groups, or focusing on economic concerns for poor people)

- Alternative forms of financing (PPP, credit, loans, etc.) should be more actively promoted and used for local projects; local borrowing should be well considered, and the procedures for a municipality to invest in longer-term investment-return projects should be revised and simplified. In the process, local government associations, financing institutions (banks, international financing institutions, etc.) and the central government should be involved.

Practical example: the case of Municipality of Tivat, Montenegro

A Decision for Municipal Land Development of the Municipality of Tivat offers communal fee reduction of the amount of 150 Euro/sq. m for all investors who plan for installing solar systems in buildings for water heating, space heating or cooling. Furthermore, Municipality of Tivat signed an Agreement with NLB Montenegro Bank to establish a special account of 15 000 Euros that covers the interest rate of the borrowed by the households money, as a subsidy to implement thermal insulation and replacement of external doors.

b) Cooperate with government authorities responsible for EE (intergovernmental cooperation both at vertical and horizontal levels)

- Engage local government associations in the inter-governmental dialogue regarding the energy efficiency issues. The local government associations can also provide knowledge and support related with the fiscal aspects of investment in energy efficiency.

- Support the development and implementation of municipal joint programmes, campaigns and projects at local, national and international level, delegate not only obligations but also financial means for the local governments to invest in energy efficiency.

An example from Bulgaria:

The Bulgarian **Energy Efficiency and Renewable Sources Fund** (EERSF, www.bgeef.com) was established 13 years ago, through the Energy Efficiency Act adopted by the Bulgarian Parliament in February 2004. The initial capitalization of EERSF is entirely with grant funds, its major donors being: the Global Environment Facility through the International Bank for Reconstruction and Development (the World Bank) - USD 10 million; the Government of Austria - Euro 1.5 million; the Government of Bulgaria - Euro 1.5 million and several private Bulgarian companies.

EERSF has the combined capacity of a **lending institution**, a **credit guarantee facility** and a **consulting company**. It provides technical assistance to Bulgarian enterprises, municipalities and private individuals in developing energy efficiency investment projects and then assists their financing, co-financing or plays the role of guarantor in front of other financing institutions. It has a profound experience with energy efficiency projects of local authorities, and in the last years it successfully develops support schemes for Energy Service Companies (ESCOs). The projects financed by the Fund have a negligible default rate (less than 1%) and it is deservedly cited as one of the most successful specialized financing institutions in the area of energy efficiency and renewable sources in Southeastern Europe.

The underlying principle of EERSF's operations is a **public-private partnership**. The Fund pursues an agenda fully supported by the Government of Bulgaria, but it is structured as an independent legal entity, separate from any governmental, municipal and private agency or institution.

The summary of the completed projects at the end of 2015 is presented in the following tables:

	Number of projects	Project size (BGN million)	EERSF financing (BGN million)
Projects financed	**176**	**69.0**	**46.2**
Municipalities	**98**	36.8	24.1
Corporate clients	**59**	20.1	14.3
Hospitals, universities and others	**19**	12.1	8.5

	Number of projects	Project size (BGN million)	BEEF financing (BGN million)
Total credit guarantees	**33**	24.2	4.42
Portfolio guarantee on ESCO contract	**29**	**17.5**	**0.6**
Partial credit guarantees (on credit contracts)	4	6.7	3.8

- Facilitate technical and financial cooperation of municipalities with national and international partners. The executive and non-executive experts at multiple levels of governance should have platforms and fora for exchange, networking, learning, professional growth.

- Provide information on and improve access to national and international funding sources for EE

Practical example: City of Prishtina, Kosovo*:

Co-generation in Pristina central heating system

The overall project cost will exceed 30 Million Euro, of which: European Commission (€13,825 million), German Government through KfW (€11 million), Government of Sweden (€1,8 million), Government of Luxembourg (€1,5 million), Municipality of Prishtina (€2 million)

The objective of the project is to improve district heating system in Pristina by replacing highly polluting and energy ineffective oil fuel with steam extrusion from Kosovo B Power Plant. The first phase of the project was completed in 2015 and currently district heating in Prishtina is functioning fully in co-generation. The operational cost for district heating was reduced with up to 50%. The changes in district heating system provide cleaner and more energy efficient heating and also reduced the demand for electricity consumption, previously some multi-apartment blocks used partially electricity for heating due to inadequate district heating supply delivered to these buildings. The modernisations of central heating system is part of introduction of integrated approach in promoting energy efficiency measures both in public and housing buildings during the whole building cycle from citizens' participation through planning to incentives for energy efficient construction and renovation of the existing building stock.

* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence

Practical example from Slovenia: incentives and funding opportunities at national level

Incentives are available at Eco Found:

Eco Fund is an independent legal entity, with the Ministry of the Environment and Spatial Planning, being represented as *majority* in the Supervisory Board. Eco Fund's main purpose is to promote development in the field of environmental protection. It is the only specialised institution in Slovenia that provides financial supports for environmental projects.

To fulfill its mission Eco Fund made use of the following loan or grant financing programmes:

- Loans to legal entities (municipalities and/or providers of public utility services, enterprises and other legal entities) and sole traders for investments in environmental infrastructure, environmentally sound technologies and products, energy efficiency, energy saving investments, and use of renewable energy sources;
- Loans to individuals (households) for conversion from fossil fuels to renewable energy sources, energy saving investments, investments in water consumption reduction, connections to sewage system, small waste water treatment plants, replacement of asbestos roofs;
- Grants to individuals (households) for investments in electric cars and for investments in residential buildings (energy efficiency and use of renewable energy sources);
- Grants to legal entities (municipalities and/or providers of public utility services, enterprises and other legal entities) for investments in electric cars and buses for public transport on compressed natural gas or biogas;
- Grants to municipalities for investments in buildings where public education takes place (schools, kindergartens, libraries etc.), newly constructed as low energy and passive buildings or renovated in passive standard.

Slovenian investment bank:

SID Bank (SID – Slovenska izvozna in razvojna banka) was established in 1992 as Slovene Export Corporation (Slovenska izvozna družba, d.d., Ljubljana) with the aim of providing insurance and financing of export for Slovene companies. Since then we have grown and evolved in step with development of Slovene economy. SID Bank is the parent company of SID Bank Group, which provides its customers a wide range of services for promotion of competitiveness in international business cooperation.

With its financial services SID bank promotes the realization of:

- regional development, particularly with the aim of ensuring corresponding development on state, regional and local level, as well as reduction of differences in economic development,
- development of commercial and public infrastructure, community and regional development, particularly with the aim of improvement of traffic, municipal and other infrastructures.
- environmental protection projects and waste disposal projects as well as projects in the field of power supply and renewable energy resources.

OP EKP 2014–2020 - Operational Programme for the Implementation of European Cohesion Policy 2014 – 2020

The Programme will play a decisive role in encouraging economic development and ensuring prosperity for all citizens in Slovenia while taking into account the specific characteristics of the two less developed regions - Western Slovenia and Eastern Slovenia. It will significantly contribute to the achievement of the national and Europe 2020 targets for smart, sustainable and inclusive growth. It aims to strengthen efforts particularly in the area of research and development, boost the innovation potentials of small and medium sized enterprises (SMEs), promote resource efficiency and reduce environmental pressures, further develop the transport sector, boost the growth of employment rates and reduce the number of people at risk of poverty and social exclusion.

- Bring together local governments and funding organisations in exchange platforms, specialist fora, make finding funding opportunities, project partners, suitable application calls, networking of municipal experts for local governments easy and cheap.

c) Contribute to improve the political, legal, institutional and economic framework conditions for EE projects

- Cut the red tape and simplify the procedures for the small- and medium-size enterprises to get involved in the local energy efficiency market;
- Enable fiscal incentives for the SMEs and private bodies that apply energy efficiency measures in their buildings.
- Explore and, if necessary, contribute to setting standards and regulations for monitoring and data collection for energy efficiency and deep renovation projects. Increase practical knowledge and capacities in municipalities in monitoring, data collection and documenting building inventory and establishing databases, make available such methodologies and practice.

d) Liaise, cooperate and exchange know-how and experience with existing local, national and international initiatives and networks promoting EE measures in municipalities

- Domestic production of adapted EE technologies should have a high priority and the use of available EU funding should be promoted to the businesses and assisted with information by the central tier of governance (national agencies, ministries, EU programmes' national info points). This will engage the local small- and medium sized enterprises in the inter-stakeholder dialogue. It may also help export technology for energy efficiency to other countries.

Practical example: Municipality of Zenica, Bosnija and Herzegovina

Biomass heating plant in Nemila

The Government of Czech Republic co-financed a project for construction of biomass heating plant and surrounding infrastructure with the district of Nemila within the Municipality of Zenica. Nemila is a transport, economic and population centre of the northern part of the municipality of Zenica with about 19,000 inhabitants. Municipality of Zenica and Czech Development Agency signed a Memorandum of Understanding on the implementation of the project "The use of renewable energy sources for the central heating system in Nemila". The total investment was 3,48 Million Euro, with the Government of the Czech Republic co-financing 43% and contributing with Czech know-how, and the rest of the investment was provided by the Municipality of Zenica (2 Million Euro).

Practical example from Romania:

With the help of AE3R, EmBuild Partner and an energy efficiency agency, the City Council of Prahova is in the process of implementation of three major municipal buildings (County Hospital Ploiesti, Maternity Hospital, and the Administrative Building) with total amount of investment €1 588 186, with total amount of CO_2 savings 912 tCO_2/year and average 37% energy savings.

- Covenant of Mayors for Climate and Energy is "world's biggest urban climate and energy initiative"[11] and is also a platform for exchange, learning and networking between municipalities. New signatories now engage to reduce CO2 emissions by at least 40% by 2030 and to adopt an integrated approach to tackling mitigation and adaptation to climate change.

Practical example: the case of Dobrich Municipality, Bulgaria

Dobrich Municipality is one the first Bulgarian municipalities that have joined the Covenant of Mayors in 2008 and its SEAP was approved in 2010. It committed to reduce the energy consumption by 20%, to increase the use of renewable energy sources by 20% and to meet and exceed the European Union 20% CO2 reduction objective by 2020. The energy transition process of Dobrich focuses more on increasing the energy efficiency of buildings and infrastructure than on promoting renewable energy. Reasons for that can be found in the framework set by the Bulgarian government (provision of financial resources, capacity of the national energy grid). Thus, the local energy transition is closely related to renewing local infrastructure and improving indoor climate conditions in buildings. Energy transition activities rely on the municipality's ability to allocate financial resources to such measures. The City of Dobrich, as other Bulgarian municipalities, strongly depends on other funding sources such as the European Union.

[11] Miguel Arias Cañete, http://www.covenantofmayors.eu/index_en.html

Country-specific examples and recommendations

5

These examples and recommendations are based on the Survey and the Guidance Note on Stakeholders' Involvement. They were enhanced by the input and recommendations for each country based on the corporate memory and knowledge captured during the national workshops by the partners.

5.1 Bulgaria

Example from Bulgaria:

Gabrovo Municipality is a co-founder and longtime member of the Municipal Energy Efficiency Network (MEEN) "Eco Energy". Through the network, Gabrovo municipality participates in the implementation of many international projects learning from the leading European experience and successfully applies some of the best practices on its territory.

Energy efficiency is among the leading priorities in the municipal plan for sustainable urban development. According to the Municipality of Gabrovo public funds invested in energy efficiency measures should aim to attract substantial private investment and achieve energy performance, more ambitious than the minimum presupposed by state rules and regulations. Following this principle, Gabrovo municipality will work to:

- Implementation of ambitious energy standards ("EnerFit" / "Passive house") in municipal projects in order to highlight the leading role of the Municipality;
- Achieving the standard "Passive house" or nZEB at construction on municipal lands (Hanover, Tyrol);
- Achieving standard "EnerFit" or Class A in renovations funded by Operational Programs;
- Exemption from local taxes on reaching the standard "EnerFit" or Class B after building renovation;
- Exemption from local taxes on reaching the standard "Passive house" or nZEB or Class A in new buildings;
- Supporting and attracting innovative companies - producers and distributors of components, materials and technologies for low-energy buildings, with a focus on SMEs; creating a "eco-clusters" (Hanover);
- Competition for the best projects implemented with financial incentives (Brussels).

The existing energy efficiency requirements recorded in the national legislation regarding the construction of new and the renovation of existing buildings, which require reaching therefore energy class "B" and "C", lead to the broad implementation of unambitious projects for energy efficiency in buildings by Bulgarian municipalities. Differently Gabrovo Municipality has much more ambitious plans that gradually are used:

The first building certified under the standard "Passive house" is constructed

The construction of a new building at "Sun" kindergarten according the "Passive house" standard turned into an essential element of the overall policy of Gabrovo Municipality for introduction of a similar type of buildings as regular construction practice.

The design of the building set high requirements for energy efficiency, the shape and orientation of the two-story building and the interior layout of the premises suggesting maximum heat gains from sunlight and, accordingly, minimal heating losses. The premises have underfloor heating, sized at temperature regime 32-37 ° C. Controlled mechanical ventilation with heat recovery units with efficiency> 75%, in which warming of the air requires a minimal amount of energy is implemented. The main heat source is an "air to water" heat pump ". As complementary and backup heating source at very low winter outdoor temperatures the building is connected to district heating. A solar installation with selective collectors and a combined boiler is installed for the production of hot water. All external and internal walls are made of bricks (25 cm) and insulation from the outside (20 cm, EPS with graphite particles). The roof is sloped, with concrete construction, insulated with 30 cm glass wool. The floor is insulated with 18 centimeters XPS under floor concrete slab and 2 cm above the floor plate shielding the underfloor heating. PVC windows with triple glazing with high thermal insulation parameters that meet the criteria of the standard "Passive house" are installed.

The mandatory air-tightness tests, which confirmed that the quality of performance meets the design features were carried out after the completion of the construction and "Sun" kindergarten became the first Bulgarian "Passive" public building - and with official international recognition and certification. Analyses of the construction works showed that the total costs are more expensive within just 7.5% in compare to the necessary costs for the construction of the same building with the mandatory energy class "B", but it will be repaid many times during the operation of the building in its life cycle.

However, this is not the most important thing. Applying the concept of "Passive house" for the children is provided optimal thermal comfort, and through the ventilation system - and significantly, at times better air quality in the building. In the toilets, for example, it is not colder than in the common room; the air next to the floor is just as warm as near the ceiling; air currents are missing even if there are high winds outside. Even in winter the windows are not open, the controlled ventilation provides two to three times lower levels of carbon dioxide than manual ventilation, without prejudice to the temperature comfort. Whether these factors will significantly reduce the level of disease in kindergarten? Yes, practice shows that this is true. So, in many European cities passive standard is already compulsory for schools and kindergartens.

Renovation of public building to Class A

After the successfully implemented project for construction of a new high energy efficient building Municipality of Gabrovo directs its efforts towards realizing a project for deep energy renovation of a municipal building, above the legally required levels. Initial plans of the municipality envisaged a small section of the primary school "Sv. St. Cyril and Methodius" to be renovated according to the passive standard for building energy renovations - EnerPHit, and the rest of the building to be renovated to energy class" C ", according to national regulations. The idea of the municipality was to analyze the difference in construction costs and energy costs by providing future monitoring of the energy consumption in the different parts of the building. However, at the end it came to a final decision to renovate the entire building to energy class "A" and then perform energy monitoring. Project preparation is underway and construction is expected to start in summer this year.

5.2 Croatia

Continue with the practice for municipalities to have and to follow EAPs. Maintain and enhance the knowledge base of the stakeholders that are primarily engaged in the EAPs elaboration and implementation (the policy makers and the decision makers, as well as the expert level executive and non-executive municipal staff).

Enhance the awareness raising on low- or no-cost energy efficiency measures but also promote the benefits of longer term capital investment in deep renovation or other energy efficiency measures.

Source and collect knowledge and develop necessary capacities for monitoring and data collection for energy efficiency and deep renovation local projects.

Make available information about funding opportunities for energy efficiency/deep renovation from national and international sources of financing. Enable the municipalities to search and apply for funding, enhance their capacities to collaborate with other local governments in partnerships and project consortia.

Continue with the practice for municipalities to have and to follow EAPs. Maintain and enhance the knowledge base of the stakeholders that are primarily engaged in the EAPs elaboration and implementation (the policy makers and the decision makers, as well as the expert level executive and non-executive municipal staff).

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Make available information about funding opportunities for energy efficiency/deep renovation from national and international sources of financing. Enable the municipalities to search and apply for funding, enhance their capacities to collaborate with other local governments in partnerships and project consortia.

There should be potentially used all available sources of funding that generally include three categories of financial instruments:

- Financial instruments and models that are available today in the Republic of Croatia;
- Financial instruments and models that are available today in the EU, but have not yet been used in Croatia
- Innovative financial models that are being developed for the implementation of individual measures in the Action Plan.

Best practice examples from Croatia

Project name: EESchools -Implementation of energy efficiency measures in schools of Krapina-Zagorje County

The EESchools project is energy efficiency project in public schools in Krapina-zagorje county co-financed by the European Investment Bank and Croatian Environment Protection and Energy Efficiency Fund. The project started in June 2011 and will end in December 2013 and was jointly coordinated by Krapina-zagorje county and North-west Croatia Regional Energy Agency (REGEA). Before the project most of the buildings were without proper insulation and with old inefficient windows. In addition, some schools needed new boiler systems.

Project results:

REGEA made initial project proposal for 20 school buildings to Krapina-zagorje county. In all schools REGEA performed a walk-through energy audit. Energy bills for previous three years are collected and analysis of energy costs is performed. Simulation of energy and financial savings is made for all schools. With this data and total investment level set by the county 10 schools were selected.

As a part of regular activities in energy management of public buildings, possibilities for reduction of the energy consumption were studied and an optimistic result - Energy Performance Indicator of 32% was expected after the implementation of all identified measures. The total investment volume of the proposed measures for all school reaches the threshold of 10.000.000 kn (app. 1,34 mil. EUR) given by the Krapina-zagorje county. The selection of school buildings was based on profitability and total investment volume but energy savings are still exceeding the EPI threshold of 30%.

All schools are built of concrete or brickworks, with varying dimensions, and have no insulation on the outer walls and on the top floor ceiling as well. Almost all windows, beside those which are already renewed, were in bad condition. The heating systems in all schools are designed as central heating system on natural gas.

Project name: ZagEE

Project results:

- Realization of average energy saving amounting to 49% in buildings and 72% in public lighting, i.e. an annual energy saving of 33.526 MWh in objects included in the ZagEE project;
- Using energy from renewable sources in an amount of 490 MWh annually in buildings;
- Reduction of greenhouse gas emissions by 8.390 tCO2 per year through energy refurbishment measures implemented in objects as part of the project;
- Production of quality technical documentation for the energy refurbishment of objects with a feasibility study for 87 buildings owned by the City of Zagreb and 3000 public luminaries;
- Production of the City of Zagreb Lighting Masterplan;
- Financing energy refurbishment from various sources, i.e. the city budget, EU funds, favorable bank loans and other sources acceptable for the city administration;
- Performing public tenders for works on the energy refurbishments of objects;
- Education of the project team in the city administration on implementation of large energy refurbishment projects;
- Education of building managers on the efficient use of objects;
- Sharing the experience and skills with other cities in the region and beyond concerning the positive results and problems in connection with the implementation of the project.

The project is implemented as part of the IEE program for technical assistance 2012. – Mobilization of local energy investments and includes financing of technical assistance as well as the production of the documentation necessary for energy refurbishment of objects, through the allocation of grants. This allows the beneficiaries to produce projects, feasibility studies and obtain the necessary documentation needed for financing the energy refurbishment of objects from sources other than the city budget, such as banks and EU funds.

The value of the ZagEE project amounts to EUR 1.813.438, and total planned investment worth of work on the realization of planned measures for which the technical documentation will be produced amounts to EUR 29.379.114. The return on investment, without using the grants, is approximately 13 years.

5.3 Germany

Propagate the benefits of EAP at local level. Increase the capacities in municipalities for rationalising and elaborating EAPs. Build/consolidate capacities for implementing EAPs. Enable conditions for inter-municipal cooperation in this regard, especially amongst smaller municipalities.

Make available information about funding opportunities for energy efficiency/deep renovation from national and international sources of financing. Enable the municipalities to search and apply for funding, enhance their capacities to collaborate with other local governments in partnerships and project consortia.

Energy-future Allgäu (Energiezukunft Allgäu)

The district council Oberallgäu expressed on 15.07.2011 with its energy-change-decision, to cover 70% of electricity consumption by with renewable energy sources in the region. In addition, the county Oberallgäu takes the responsibility to actively contribute to energy conservation, development of renewable energies and to advance energy efficiency. With the project "energy future Allgaeu" the activities of many innovative actors in the Allgäu are linked together and highlights are made visible. In the first phase of the project, data on energy supply and energy use are collected. The potential for saving and efficient use of energy and renewable energies are analyzed. On this basis, goals for the Allgäu are developed - with broad participation of the population and various stakeholders from politics and business - and specific projects for implementation have to be decided. In many municipalities in the Allgäu, sustainable energy action plans and climate protection plans are prepared. Municipalities established climate protection as an ongoing process, using the european energy award.

Energy-Management in the city of Kempten

The city of Kempten is shining example for a an excellent municipal energy management. The municipal energy management was established in 2000, the goal of the energy manager ist to reduce the consumption of energy (heat and electricity) and water in the entities of the city of Kempten. The main tasks are energy controlling, energy audits, review of contracts with suppliers, information and motivation of responsible persons and users of the buildings and the control and optimization of technical facilities.

Additionally to the energy management, in 2016 the city council adopted guidelines mandatory for all measures at municipal buildings. This is an important step for the integral management of energy and resources towards the "strategic goals 2030" that Kempten has set for itself. The goals of the guidelines and information is to reduce the costs for financing, operation and environmental impacts and to ensure the health and well-being of the users of the buildings. The guidelines consist of 3 major parts: guidelines for planning, guidelines for the operation of buildings and guidelines for the behavior of the users. Furthermore there a check-lists for the planning of measures for certain categories like e.g. electric installations, heating systems, construction of buildings, ventilation and air condition systems and operation and maintenance. The guidelines are published and freely available on the website of the city of Kempten. (https://www.kempten.de/de/energieleitlinie-kempten-2011.php)

5.4 Serbia

Recommendations:

Shrink the gap in knowledge of EU legislation and directives related to energy efficiency and deep renovation in public buildings. Provide tailored information packages/short term training curricula for the decision-makers at local level. Use the experience, including regional, and capacities of the Standing Conference of Towns and Municipalities in energy efficiency awareness raising and promotion.

Review and revise the procedures for citizens' participation at local level. Enable experience exchange, best practice dissemination and peer-to-peer learning for citizens' participation. Use/update the available methodologies for involving citizens in energy efficiency planning and investment, especially during local budget planning, discussion and adoption processes.

Source and collect knowledge and develop necessary capacities for monitoring and data collection for energy efficiency and deep renovation local projects.

Consolidate and make available information about funding opportunities for energy efficiency/deep renovation from national and international sources of financing. Enable the municipalities to search and apply for funding, enhance their capacities to collaborate with other local governments in partnerships and project consortia.

5.5 Slovenia

Recommendations:

Continue with the practice for municipalities to have and to follow EAPs. Maintain and enhance the knowledge base of the stakeholders that are primarily engaged in the EAPs elaboration and implementation (the policy makers and the decision makers, as well as the expert level executive and non-executive municipal staff).

Consolidate and make available information about funding opportunities for energy efficiency/deep renovation from national and international sources of financing. Enable the municipalities to search and apply for funding, enhance their capacities to collaborate with other local governments in partnerships and project consortia.

Elementary school Škale

In 2005, Municipality of Velenje adopted the action program and the guidelines for the systematic implementation of energy concepts in municipality. This document contain following measures related with deep energy renovation:

- Identifying actors responsible for promotion and use of renewable energy sources (solar systems, heat pumps, biomass, landfill gas cogeneration, etc.)
- Energy renovation of building, increase efficiency of heating systems, and energy contracting (EPC and ESC)

KSSENa was responsible for implementation of these measures, and one of lighthouse project was renovation of primary school Škale. For renovation of boilers and heating system, private investor was engaged. ESCO Company renovated the heating system, replace oil boilers with new cogeneration of heat and power system (CHP). In addition, Municipality renovated the building, replacing old windows, blinds and doors. Average yearly heat consumption reduced for 186.683 kWh and in seven years School saved 1,18 MW of energy.

ZD Velenje (Medical center Velenje)

Velenje Municipal council confirm local energy concept in April 2012. ZD Velenje was identified, as on one of municipal owned building, that need deep energy renovation the most. Later in 2012 first activities and project documentation development started. Project application for EU cohesion founds was successful so 80 % of investment was covered from grants, 20 % was financed by the Municipality of Velenje. Whole investment in deep renovation and other organizational measures was 1.046.996 EUR, and it contained following measures:

- Insulation of external walls;
- Replacement of joinery;
- Insulation of ceiling;
- Installation of thermostatic valves;
- Installation of central ventilation and heat recovery system;
- Optimization of the heating system;
- Hydraulic balancing of the heating system;
- Installation of heat pumps and thermal solar panels for water heaters;
- Installation of energy management system;
- Organizational measures

After renovation, KSSENA took over monitoring of energy consumptions, and offers energy counseling for building users. KSSENA monitors energy savings with advanced energy management system and annual energy savings in 2016 was 3.272 MWh of electricity and 704 MWh of heat.

5.6 Romania

Recommendations:

Review and revise the procedures for citizens' participation at local level. Enable experience exchange, best practice dissemination and peer-to-peer learning for citizens' participation. Use/update the available methodologies for involving citizens in energy efficiency planning and investment, especially during local budget planning, discussion and adoption processes.

Explore experience of local governments on energy efficiency measures and deep renovation in public buildings from fellow municipalities in Croatia, Germany or Slovenia.

Source and collect knowledge and develop necessary capacities for monitoring and data collection for energy efficiency and deep renovation local projects.
Consolidate and make available information about funding opportunities for energy efficiency/deep renovation from national and international sources of financing. Enable the municipalities to search and apply for funding, enhance their capacities to collaborate with other local governments in partnerships and project consortia.

Useful information for improving investment climate

6

The table below gives an overview of possible sources of funding that is available to regional and local governments for successful implementation of measures for establishing more favourable investment climate for improving energy efficiency in buildings.

Source of funding	Type	Maximum amount	Share of the total costs (%)	Period of availability of funds
City budget	Own funds	-	100	2016 – 2019
National programs in energy renewal	Grant / loan	Not specified	Up to 95	2016 - 2020
Environmental Protection and Energy Efficiency Fund (EPEEF)	Grant	Not specified	Up to 80	2016 – 2020
European structural and investment funds (ESIF)	Grant	10.676 billion EUR total	Up to 100	2016 - 2020
Croatian Bank for Reconstruction and Development (HBOR)	Loan	Not specified	Up to 75	2016 – 2020
European Investment Bank (EIB)	Loan / guarantees	Not specified	Up to 50	2016 - 2020
European Bank for Reconstruction and Development (EBRD)	Loan	5-230 million EUR per project	Up to 35	2016 – 2020
European Energy Efficiency Fund (EEEF)	Loan	Not specified	Up to 100	2016 - 2020
Western Balkans Sustainable Energy Financing Facility II (WeBSEFF II)	Loan / grant	2.5 million EUR	Up to 50	2016 – 2020
Horizon 2020	Grant	Up to 18 million EUR	Up to 100	2016 - 2020
European territorial cooperation programs	Grant	Up to 5 million EUR per project	Up to 85	2016 - 2020
European Local Energy Assistance (ELENA)	Grant	Not specified	90	2016 - 2020
Joint European Support for Sustainable Investment in City Areas (JESSICA)	Grant/loan/ guarantees	Not specified	Up to 100	2016 - 2020
Joint Assistance to Support Projects in European Regions (JASPERS)	Technical assistance	-	-	2016 - 2020
Grants of the members of European Economic Area and Norway	Grant	103.4 million EUR total	Not specified	2016 - 2021
Energy Service Company (ESCO)	Private capital / loan	-	Up to 100	2016 - 2020
Public-private partnership (PPP)	Private capital	-	Up to 100	2016 - 2020

EmBuild

Empower public authorities to establish a long-term strategy for mobilizing investment in the energy efficient renovation of the building stock