

D 3.2.2 – Funding Tools



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Introduction

Energy Efficiency in public buildings is one of the top priorities set by the EU and countries have set it high in the priority list. The biggest obstacle in these targets is the initial investment required for the Energy Efficiency measures. Financing mechanisms are available that act either as low interest loans or as funds, co-financing energy efficiency projects.

This report analyses the different financing mechanisms in place at EU level that can finance energy efficiency projects for public buildings in the various countries. At National level, each country can apply for those funds and a larger number of countries use the Structural funds, ERDF and Cohesion funds to facilitate the energy efficiency projects. Most of the countries have set up their own funding mechanisms, such as co-financing grants for the energy upgrading of buildings. At a regional level, usually in the larger countries that have separate regional governance, some funds are also established, mainly on the axis 4 – low-carbon economy. Locally, the financing options are limited but through EU co-financed projects some soft measures can be implemented along with energy studies. Additionally, some area targeted funds also may be established, selectively co-funding projects, especially in socially deprived areas. Other funding methods typically used include financing from ESCOs using Energy Performance Contracting, green loans from financial institutions and private-public partnerships.

The countries involved in this report are the partners of the project ENERJ and include Albania, Croatia, Cyprus, Greece, Italy, Malta, Portugal Slovenia and Spain.

1 European Funding

European funding regarding energy efficiency (EE) measures in public buildings comes in different forms. The general financing opportunities come from European Structural and Investment Funds (ERDF, Cohesion Fund), European Funding Programmes (LIFE, Horizon 2020 etc.), Project Development Assistance (ELENA, JASPERS etc.) and Financial Institutions Instruments (EFSI, EEEF etc.). Some Alternative Financing Schemes for EE measures in public buildings may come from Energy Performance Contracting (EPC), Crowd-funding, On Bill Financing, Green Municipal Bonds etc.

1.1 European Regional and Development Fund (ERDF)

As part of the European Structural and Investment Funds (ESI Funds) the ERDF funds projects related to the EE of public buildings. The main beneficiaries of the fund include local, regional, national authorities, NGOs, social cultural and educational institutions, companies SMEs and associations with the EU-28 Member States being eligible for participation. The focus areas for the ERDF depend on the Operational programmes and can include RES, smart distribution systems and EE infrastructure. Other focus areas may include Research, Innovation, ICT the Competitiveness of SMEs, planning for low-carbon economy, climate change adaptation and risk management, environmental protection and resource efficiency. The type of funding may come as grants which is usually co-financed, Financial instruments such as guarantees, loans, equity participation and other risk-bearing mechanisms and technical assistance support. Furthermore, European Territorial Cooperation Programmes may also provide funding opportunities

1.2 Cohesion Fund (CF)

CF is another fund part of the ESI Funds which although sets some boundaries in the participating countries, including only 15 Countries of the EU (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia) with its main beneficiaries being local and regional authorities. The focus areas of CF include amongst others energy: the use of renewable sources and efficiency, the low-carbon economy, climate change adaptation, risk prevention and management, environmental protection and resource efficiency. The types of funding come in the form of grants, financial instruments such as guarantees, loans, equity participation and other risk-bearing mechanisms, a possibility of technical assistance and support, along with some indirect funding (e.g. loans, risk capital and seed funding)

1.3 Applying for ESI Funds

- All ESI Funds can be used in integrated packages at local, regional or national level through the use of territorial integrated instruments such as Community-led Local Development (CLLD) and Integrated Territorial Investments (ITI). Both vehicles can be combined with overlapping elements, depending on the Operational Programs. It provides financing for urban or other territorial strategies through combined investments from more than one priority axis of one or more Operational Programmes (ERDF, ESF and CF mainly, but complemented by EAFRD and EMFF).

Community-led Local Development (CLLD)

The beneficiaries are local action groups composed of public and private local socio-economic interests, in which, at the decision-making level any represents more than 49% of the voting rights. The participating countries depend on the Operational Programme of the ESI Funds and the focus areas include capacity building, training and networking related to the

Community-led local development strategies, i.e. climate change and transition to a low carbon society. The average project size is estimated to be a minimum of €3 million for the full funding period (7 years) with a co-funding rate between 50-90% depending on the ESI Funds and regions and it comes in the form of grants.

Integrated Territorial Investments (ITI)

The main beneficiaries are local and regional authorities, regional development bodies and NGOs although cities, sub-regional and local bodies should at least have a substantial responsibility in the ITI. Only 15 Countries of the EU (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia) can participate in the ITI. The focus areas include Institutional capacity (multi-level governance, partnership building with local actors, monitoring and evaluation capacity), low-carbon economy, climate change adaptation and risk prevention and management, environment protection and resource efficiency, as well as sustainable transport. The funding comes in the form of grants, repayable assistance and financial instruments and the co-funding rate depends on ESI Funds and regions, but blending with local/regional/national and other funding is strongly encouraged.

Financial Instruments (former JESSICA)

It is possible for financial instruments to operate across all European and Structural Funds sources and thematic priorities in the 2014-2020 programming period. An example of the type of financial instrument that could be developed is the Urban Development Fund (UDF). The UDF can invest in public-private partnerships and other integrated projects for sustainable urban development. The main beneficiaries of these Financial Instruments are public authorities (including local and regional), commercial financial institutions, public agencies, investment fund holders, property developers, NGOs etc. and the participating countries depend on the operational programme of the ESI Fund. The focus areas can be urban infrastructure including energy, heritage or cultural sites, for tourism or other sustainable uses, redevelopment of other brownfield sites, office space for SMEs, IT and/or R&D sectors, University buildings, including medical, biotech and other specialised facilities and energy efficiency improvements. UDF's can vary in mechanism and size, depending on the geographic basis and investment focus. Co-financing and Co-investment (from the private sector) is a requirement to access the EDRF resources. The funding comes in the form of financial instruments (revolving fund), which provides mainly loans, but also equity and guarantees.

1.4 European Funding Programmes

LIFE (Environment and Climate Action)

The main beneficiaries are public authorities, SMEs, private non-commercial organisations and NGOs and EU-28 Member States can participate. The focus areas of LIFE include environment and resource efficiency, nature and biodiversity, environmental governance and information, climate change and mitigation, climate change and adaptation and climate change governance and information. The EU contribution for 1-5 beneficiaries (traditional projects 1-5 years) ranges between €500,000-€1.5 million and for 2-10 beneficiaries (integrated projects 6 years or more) between €8 million - €15 million, with a co-funding rate between 2014-2017 at 60% and between 2017-2020 at 55%, whereas for capacity building projects between 2014-2020 the funding is 100%. The types of projects that LIFE provides funding for include demonstration and pilot, best practices, information awareness and dissemination, technical assistance, capacity building and preparatory projects and the funding comes in the form of grants.

Urban Innovation Actions (UIA)

The beneficiaries include local authorities with a population of at least 50,000 inhabitants or an association or groupings of local authorities that their inhabitants sum up to 50,000 and the participating countries are the EU-28. The initial call focus areas were integration of migrants and refugees, jobs and skills in the local economy, energy transition and urban poverty, but next calls will also include: climate adaptation, circular economy, housing, urban mobility, green procurement, digital transition, air quality and nature-based solutions. The average project size must be a maximum of €5 million per project and the co-funding rate is set at a maximum of 80% with a project maximum period of three years. The types of projects that are being funded under UIA include new innovative actions to interconnected and interrelated local challenges thus testing new urban solutions in pilot projects and participatory processes involving stakeholders. The funding comes in the form of grants (co-financing).

1.5 European Territorial Cooperation Programmes – Interregional programmes

INTERREG EUROPE

The main beneficiaries are municipal institutions and administrative bodies, social, cultural and educational institutions, NGOs, companies, SMEs and associations and the countries that are included are the EU-28 along with Switzerland and Norway. They must include at least three countries out of which at least two are Member States. The focus areas are research and innovation, ICT, competitiveness of SMEs, low-carbon economy, climate change adaptation and risk management, environmental protection and resource efficiency and transport. The specific objectives of these types of projects are the dissemination of good practices and expertise in sustainable urban development including urban and rural linkages and the reinforcement of the European Territory Cooperation Programme and the effectiveness of the cohesion policy. The project size depends on the interregional cooperation and the co-funding rate is 85% for all the priority topics and 74.52% for the 'technical assistance' axis. The funding is made available in the form of grants.

URBACT III

The main beneficiaries are local authorities local agencies (city's stakeholders) and NGOs and the countries that are included are the EU-28 including also Switzerland and Norway with at least three Member States included as beneficiaries. The focus areas include integrated sustainable urban development regarding: smart and inclusive growth, low-carbon economy, resource efficiency, environmental protection, labour mobility, social inclusion, poverty reduction, policy design and implementation and climate change adaptation. The specifics of the projects must include transnational exchange, capacity building and capitalisation and dissemination via the creation of different types of networks between cities on strategies, implementations and best practice exchanges. The project sizes of different types of network are between €400,000 - €750,000 with a period between 6 to 24 months and the co-financing is at 70% for partners in more developed regions, 85% for partners in less developed regions and 50% for Norwegian or Swiss partners. The funding comes in the form of grants.

1.6 Focus on Horizon 2020

Secure, Clean and Efficient Energy: Energy Efficiency

The projects under this section are related with public authorities and include coordination and support actions, as well as public procurement of innovative solutions. The participating countries are the EU-28 along with overseas countries and territories and there have to be at

least three legal entities, each located in different countries and in one call case one legal entity. The focus areas of these include heating and cooling, engaging consumers towards sustainable energy, buildings, industry, services and products and innovative financing for energy efficiency investments. The project size ranges between the different calls between €0.5-1.5 million, €1-1.5 million, €1-2 million and €3-4 million depending on the section chosen. The co-funding rate varies with the nature of the proposal to 100% for research and innovative actions, 70% for innovative actions (except for non-profit where 100% applies) and for coordination and support actions 100% in most cases.

Secure, Clean and Efficient Energy: Competitive Low-Carbon Energy

The projects under this section are related with public authorities and include coordination and support actions. The participating countries are the EU-28 along with overseas countries and territories and there has to be at least one legal entity established in an EU Member State or Horizon 2020 associated country. The focus area is the market uptake of renewable energy technologies and the recommended project size in the range of €1-3 million. The co-funding rate varies with the nature of the proposal to 100% for research and innovative actions, 70% for innovative actions (except for non-profit where 100% applies) and for coordination and support actions 100%.

Cross-Cutting Activities: Smart and Sustainable cities

The projects under this section are related with public authorities and include innovation actions and research innovation actions. The participating countries are the EU-28 along with overseas countries and territories where at least three entities, each located in a different country need to be involved. The focus areas include smart cities and communities, sustainable cities through nature based solutions and the inclusion of climate change adaptation. The recommended project sizes range from €12-18 million, to a €10 million minimum, to around €7.5 million depending on the proposals thematic section. The co-financing for research and innovation actions is 100% and for innovation actions is 70% (except for non-profit legal entities, where a rate of 100% applies).

1.7 European Project Development Assistance Facilities

ELENA EIB

The main beneficiaries are local and regional authorities or other public bodies and a grouping of such bodies (legal entity with public service mission, controlled by a public authority and financed by more than 50% by public sources). The participating countries can be the EU-28 and the overseas countries and territories. The projects can be co-financed up to 90% with a budget cost of more than €30 million and the focus areas include energy efficiency in buildings or street lighting, integrated renewable energy sources in buildings, sustainable district heating/cooling systems, CHP and RES, energy efficiency and integrated renewables in urban transport and sustainable freight logistics. Furthermore, the focus areas include smart grids, ICT infrastructure for EE, inter-modular transport facilities and climate change adaptation. The leverage factor for these projects needs to be 1:20.

ELENA KfW

The main beneficiaries are local and regional authorities or other public bodies and a grouping of such bodies and eligible for participation are financial intermediaries, targeting small local investments in France, Italy, Austria, Poland and Denmark. The focus areas include energy efficiency in public/private buildings and street lighting, integrated renewable sources (RES), energy efficiency and integrated RES in urban transport including freight logistics in urban areas, local infrastructures for energy efficiency and municipal waste-to-energy projects. The average investment size of such projects need to exceed €50 million with a leverage factor of 1:20 and a co-financing rate up to 90%.

Horizon 2020: Call EE22 PDA

The main beneficiaries are local and regional authorities, public bodies, public and private infrastructure operators, ESCOs and SMEs. The participating countries eligible include the EU-28 and the overseas countries and territories. The focus areas include public and private building stocks, public lighting, district heating and cooling networks, urban transports in urban and sub-urban agglomerations, energy efficiency in industry and services along with investments in RES when combined with energy efficiency gains. The projects need to have a leverage factor of 1:15 and the average investment has to be within the range of €7.5 to €50 million and the co-financing is up to 100% of the eligible costs.

JASPERS

The main beneficiaries are local, regional, national authorities or other entities with public interest. The countries that are eligible to participate include all EU countries along with the IPA countries. The focus areas include infrastructure, roads, rails, air and maritime transport, water and waste water, waste management, energy projects including energy efficiency in buildings, district heating, RES production and CHP, as well as urban transport. The project size needs to be above €50 million and for transport cases above €75 million and the co-financing can be up to 100% of the eligible support.

1.8 Financial institution Instruments

European Fund for Strategic Investments (EFSI)

The main beneficiaries include the public sector, entities of all sizes, including utilities, special purpose vehicles or project companies, SMEs, mid-caps, national promotional banks or other intermediate banks, funds and any other form of collective investment vehicles and investment platforms. The eligible participating countries include the EU-28 and Albania, Iceland, Israel, FYROM, Montenegro, Serbia, Turkey, Norway and Switzerland. The focus areas include (Digital) infrastructure development in transport and energy, renewable energy, energy efficiency and energy interconnections, risk financing for SMEs and mid-caps, education, health, environmental and natural resources. There are no restrictions in the eligible project size. A guarantee of €16 billion should cover first losses of higher-risk projects and an additional €5 billion allocation of EIB capital to co-invest.

EIB Municipal Framework Loans

The main beneficiaries are local and regional authorities with more than 75,000 inhabitants and the participating countries may include the EU-28 and other countries (e.g. Turkey, Montenegro and Ukraine). The focus areas include urban roads and public transport, water, sewage, solid waste, education, health facilities, social housing, public buildings, energy (e.g. energy efficiency in public buildings), cultural and sport facilities. The projects average investment size need to be smaller than €50 million and the financing comes in the form of a loan.

Debt for Energy Efficiency Projects (DEEP GREEN initiative): PF4EE instruments

The beneficiaries are divided into four pillars:

- Pillar 1: local/regional authorities and public bodies
- Pillar 2: Banks (Private Finance for Energy Efficiency)
- Pillar 3: ESCOs
- Pillar 4: Utilities

The countries operating are only Spain, Czech Republic and France. The focus areas include public and private building stocks, public lighting, district heating and cooling networks, urban

transport in urban and sub-urban agglomerations and energy efficiency (investments in RES are eligible in combination with EE gains). The average investment size is for projects below €5 million and is done through the support of local financial intermediaries via low-cost long term loans, credit risk protection and enhanced lending expertise for energy efficiency.

EEEE

The main beneficiaries are local and regional authorities, public and private entities acting on their behalf (i.e. utilities, public transportation providers, social housing associations) and it is eligible for the EU-28 countries. The focus areas include energy efficiency, renewable energy and clean urban transport. The project size needs to be in the range of €5-25 million and the financing come in the form of loans, guarantees and equity.

1.9 Alternative financing schemes

Energy Performance Contracting (EPC)

EPC is a contractual arrangement between a beneficiary and an Energy Service Company (ESCO) about energy efficiency improvements or renewables installations. Normally an ESCO implements the measures and offers the know-how and monitoring during the whole term of the contract. Essentially the ESCO will not receive its payment unless the project delivers energy savings/production as expected.

Soft loans, loan guarantees and portfolio guarantees

Soft loan schemes (below market rates and longer payback periods) and loan guarantees (buffer by first losses of non-payment) are mechanisms whereby public funding facilitates/triggers investments in EPC. Furthermore, portfolio guarantees for ESCOs reduces the risks of payment delays, so reduces the overall costs of financing (solid protection from later payments).

Revolving Loan Funds

A revolving loan fund is a source of money from which loans are made for multiple sustainable energy projects. Revolving funds can provide loans for projects that do not have access to other types of loans from financial institutions, or can provide loans at a below-market rate of interest (soft loans). This counts as an example of financial instruments using ESIF.

Cooperatives, Citizen based financing and Crowd funding platforms

A crowd-funding platform pools resources of different actors, utilizing most of the time an internet-based platform. This can happen in combination with energy cooperatives, which are business models based on shared ownership and democratic decision-making procedures.

On Bill Financing

Energy suppliers collect the repayment of a loan through energy bills. It leverages the relationship, which exists between a utility and its customer in order to facilitate access to funding for sustainable energy investments.

Green Municipal Bonds

Local government (or their agencies) can issue green bonds to fund their sustainable energy projects. A green bond can operate as a normal bond, which is a debt that will be paid back, depending on the characteristics of the bond, with interest. These can be made attractive via tax-exemptions.

2 National funding

At a National level, most of the partner countries have used various funding mechanisms for funding energy efficiency projects on their building stock. Setting up grant schemes is a common approach from the partner countries. The Cohesion fund along with the ERDF are the two main mechanisms used by the partner countries, providing co-financing and low interest loans.

2.1 Albania

The EE Law requires an Energy Efficiency Fund to be set up, which is to provide financial support to projects that will improve energy efficiency. According to Article 19 of the EE Law, the EE Fund will be established as a separate legal entity in the form of a non-profit organization having its legal seat in Tirana. The EE Fund goal is to financially support investments which improve the energy efficiency. All the energy producers, transmitters, suppliers and end-costumes of the electricity power are entitled and may benefit from the EE Fund financial support. It is worth noting that the EE Fund will be financed by the funds obtained by means of donors' agreements signed between the Government and donors to finance the implementation of energy efficiency projects. In addition, the state budget, local and foreign institution or individuals are entitled to and may directly finance the EE Fund.

The EE Law explicitly provides that EE Fund will only support financially those programs, which comply with the National Energy Efficiency Action Plan (NEEAP) as such as the investments that improve the energy efficiency of the:

- End-consumers;
- Producers, transmitters and suppliers of the power energy;
- Public lightning;
- Water supply and sewages systems, etc.

The EE Fund will be managed by a supervisory council, which appoints/dismiss the executive director. The latter is entitled the run the day-to-day activity of the EE Fund, in compliance with the supervisory council directives and its Bylaws.

2.2 Croatia

On 12 December 2014, the European Commission and the Croatian Government adopted the Operational Programme "Competitiveness and Cohesion" 2014-2020. The Operational Programme has been developed in co-operation of state administration bodies, representatives of local and regional government, social partners and civil society. During the preparation of this document, there were several consultations with the public on the priority areas of investments covered by this program, including investments in public buildings. The entire process is coordinated by the Ministry of Regional Development and EU Funds.

Priority axis dedicated to energy efficiency in public buildings is called 04 - Supporting the transition to a low carbon economy in all sectors, and sub-axis 4c - Support for energy efficiency, smart energy management and renewable energy sources in public infrastructure, including public buildings and in the housing sector.

Since buildings are the largest consumer of energy, this investment priority will significantly contribute to the objectives of the Europe 2020 Strategy and the Croatian Energy Strategy, which refers to the 20 percent increase in energy efficiency by 2020, it was established that the largest savings (34%) can be achieved in the building sector (including residential buildings). Also, this axis will contribute to achievement of the objectives related to increase of the share of renewable energy in energy consumption, with particular emphasis on providing independent solutions for energy supply, which will contribute to achievement of

national objectives related to the production of electricity, especially in the production of energy for cooling / heating, but also the security of supply, which is one of the main objectives at EU and national level.

Similarly, investment in improvements of public energy infrastructure (system of centralized heating and public lighting) will contribute to the efficient use of energy sources and reducing greenhouse gas emissions. For this objective, the budget of 211 810 805,00 EUR has been secured and its usage is coordinated by The Ministry of Construction and Physical Planning. In accordance with a long-term strategy for the promotion of investment in the restoration of the national fund building the Croatian and the Third National Action Plan for energy efficiency, these funds aim to contribute to the reconstruction in terms of energy efficiency and reduce energy consumption of public buildings, as well as increasing the use of renewable energy sources for the same purpose.

The Environmental Protection and Energy Efficiency Fund (EPEEF) is the central point for collecting and investing extra budgetary resources in the programmes and projects of environmental and nature protection, energy efficiency and use of renewable energy sources.

In the system of management and control of utilisation of EU structural instruments in Croatia, the Fund performs the function of Intermediate Body level 2, for the specific objectives in the field of environmental protection and sustainability of resources, climate change, energy efficiency and renewable energy sources.

The activities of the Fund comprise the tasks related to financing of the preparation, implementation and development of programmes and projects and similar tasks in the field of conservation, sustainable use, protection and improvement of the environment, as well as the field of energy efficiency and use of renewable energy sources, and in particular:

- Expert and other tasks in relation to the collection, management and utilisation of the Fund's resources,
- Acts as an intermediary in the matters related to the financing of environmental protection and energy efficiency from foreign funds, international organisations, financial institutions and bodies, as well as national and foreign legal and natural persons,
- Maintaining the database of programmes, projects and similar activities in the field of environmental protection and energy efficiency, and of the required and available financial resources for their implementation,
- Promoting, establishing and carrying out cooperation with international and national financial institutions and other legal and natural persons, for the financing of environmental protection and energy efficiency in accordance with the National Environmental Strategy and the National Environmental Action Plan, the Energy Development Strategy and the Implementation Programme for the Energy Development Strategy, national energy programmes, other programmes and acts in the field of environmental protection and energy efficiency, and international treaties to which the Republic of Croatia is party, for the purposes specified in the provisions of the Act on the Environmental Protection and Energy Efficiency Fund and
- Other tasks related to promoting and financing environmental protection and energy efficiency that are set out in the Statute of the Fund.

Fund, among other things, issues yearly tenders for co-financing of the elaboration of energy certificates for public buildings, preparation of project documentation for public buildings, implementation of investments in public buildings (exchange heating / cooling systems, replacement of windows, energy efficient facade, etc.), installation of renewable energy sources on public building, etc. For every business year, the Management Board of the Fund adopts the Work Programme of the Fund and the Financial Plan. The Work Programme and the Financial Plan list, respectively, the programmes and projects, as well as the financial resources secured for environmental protection and energy efficiency. The Work Programme lists work targets in a certain period, and gives a detailed overview of the programme for implementing the measures aimed at achieving these targets.

Apart from the annual Work Programme, the Fund also adopts a multiannual Work Programme in accordance with the National Environmental Strategy and the National Environmental Action Plan, the Energy Development Strategy and the Implementation Programme for the Energy Development Strategy, national energy programmes, other acts and regulations on environmental protection and energy efficiency, and international treaties to which the Republic of Croatia is party, with the agreement of the Croatian Government.

The Fund grants financial resources to legal and natural persons for the purpose of financing the programmes, projects and other activities, set out in the Act on the Environmental Protection and Energy Efficiency Fund through: loans, subsidies, financial assistance and donations.

Financial resources are granted on the basis of a completed public contest. Appropriations of the Fund are used primarily to finance the programmes, projects and similar activities set out in accordance with the National Environmental Strategy and the National Environmental Action Plan, the Energy Development Strategy and the Implementation Programme for the Energy Development Strategy and national energy programmes.

Appropriations of the Fund may be used solely for the purposes for which they were granted. If the beneficiary of appropriations fails to use the funding in the manner and for the purposes specified in the contract, the beneficiary shall repay the Fund the amount spent for non-earmarked purposes, and shall be liable to compensate any damage to the Fund in the manner specified in the contract on the use of funding.

The Fund will not publish the invitation to tender in the case where it, as a contracting party, directly co-finances and participates in the implementation of the programmes, projects and similar activities under the Act on the Environmental Protection and Energy Efficiency Fund.

General acts of the Fund set out the terms and conditions which have to be fulfilled by the beneficiaries of the Fund's appropriations, the terms and conditions for granting the financial resources, the criteria and benchmarks for evaluating the applications for financial assistance of the Fund, and the method for monitoring dedicated use of the resources and contracted obligations between the Fund and beneficiaries of its financial assistance.

In the process of financing the above programmes, projects and similar activities, the Fund cooperates with the banks and other financial institutions.

2.3 Cyprus

«Save – Upgrade in households and in office buildings»

The Energy Service of the Ministry of Energy, Commerce, Industry and Tourism (MECIT) initiated a funding scheme for the energy efficiency upgrading of households and company buildings/offices, where a budget total of €8 million has been made available to co-fund the investments for energy upgrading in the building stock nation-wide. The target of the fund is the energy upgrading of households and offices to either EPC category B or above, 40% energy savings or become a nearly zero-energy building. The scheme is covering the 50% of the investments made in energy upgrading of thermal insulation of roof and/or walls, double glazing windows, LED lighting, energy efficient boilers, energy efficient split units, shadings etc. For the cases of nZEB and consumers with low income, disabled etc. the co-financing reached to 75% of the costs. The energy upgrading had to satisfy at least two of the three minimum u-values indicated by the MECIT. The funding is done through the «RES and EE» fund.

«ENERGEIN»

The European project Energein funded the energy upgrading and RES installation in two public buildings (Commerce Service building and Electromechanical Service building) where the whole buildings were refurbished including thermal insulation, PV system installation and heat pumps. Furthermore, some individual measures of energy efficiency and RES have been also

carried out at the Parliament building and the Ministry of Labour, Welfare and Social Insurance building.

«SYNERGEIN»

The project is currently running and it aims in the energy upgrading of four buildings that belong to Municipalities or Communities into energy class B.

«Solar Energy for Everyone»

A PV scheme is available for installing up to 5kWp of PV panels on households and commercial buildings using the net-metering method. Society members with disabilities and low-income households can apply for a € 900 funding for each kWp installed for up to 3kWp (€ 2,700). Additionally, the installation of 10kWp-10MWp of PV is permitted for self-consumption.

2.4 Greece

The National Energy Efficiency Programs for Municipal Buildings called "Exoikonomo" (all Municipalities over 10.000 inhabitants), and "Exoikonomo II" (all Municipalities), for the improvement of the energy performance of public buildings. 104 Municipalities have been funded through Exoikonomo I for a total amount of 40 M€ (OP Environment – Energy 2007 – 2013) (source CRES).

Other national funding schemes include:

The "Green" Fund: a special Fund collecting a number of fines on environmental issues mainly, which re-distributes these financial resources in favour of eco-friendly measures. Its average support amounts to 100M Euro.

The "European Economic Space" has also supported a number of RES applications in public buildings, namely photovoltaics, biomass boilers, geothermal systems, solar heating integrated systems, etc for a total amount of 12 M Euro through the period

Local Authorities may also petition to Structural Funds from retrofitting of Public Buildings, on a case-per-building mode.

2.5 Italy

There are two financial tools at national level: the first one has represented by so-called "**Fondo Kyoto per le scuole**" (Kyoto funds for school buildings) that provides the energy efficiency for school buildings, through a notice that is currently in force (Ministerial Decree 40/2016). This tool aims to promote, through granting of subsidized loans (0,25%), the implementation of measures of energy efficiency on public building, for school and university use, including nursery school and institutes for high art, music and educational matter. The energy audits are included amongst the funded actions. The following entities may obtain the subsidized loans:

- Public Subjects property owner;
- Public Subjects who, although not owners, have the use of the public buildings above described;
- Investment funds, made up with specific laws;

The available resources amount to euro 247.093.955,15 and will be allocated based on the chronological order of receipt. The interesting thing is that the subsidized loans are considered outside the stability pact imposed by European Commission.

The other financial tool is the "New Conto Termico", effective from 31 May 2016, that strengthens and simplifies the support mechanism already introduced from the Ministerial Decree 28/12/2012, which promotes the following actions for energy efficiency improvement and thermal energy production from renewable energy sources:

Wall and roof thermal insulation;
 Substitution of windows;
 Installation of shading systems;
 Transformation of existing building into NZEB";
 Indoor lighting;
 building automation technology;
 substitution of existing heating plants with higher efficiency ones;
 replacement of existing technological plants with generators using renewable sources such as heat pumps, also for combined air conditioning- hot water, boilers, stoves, fireplaces biomass, hybrid systems to heat pumps ;
 installation of solar thermal systems, also combined with solar cooling technology for generator of cold.

The beneficiaries are public administrations, business and individuals that will have access to funds for **900 million** of euro per year, of which 200 for the PA. The responsible of the management of these incentives is GSE (public national manager for energy services).

The new "conto termico" provides the following incentives refunds from a minimum of 2 years to a maximum of 5 years:

- up to 65% of costs sustained for "nearly zero emission buildings" (NZEB);
- up to 40% for insulation actions on walls and roofs, for substitution of windows, for installation of shading systems, indoor lighting, building automation technology and condensing boiler;
- up to 50% for insulating interventions in the climatic zones E/F and up to 55% in case of thermal insulation and substitution of windows, when combined with another plant (condensing boiler, heat pumps, solar thermal system, etc.);
- up to 65% for heat pumps, biomass boiler, hybrid systems with heat pump and solar thermal systems;
- 100% of the sustained costs for energy audit and energy performance certificate (EPC) for public administration (and ESCO that operate on their behalf);

"New conto termico" provides the possibility, for public administration, to obtained a part of cash in advance at the same time with the start of the interventions.

2.6 Malta

"IRRESTAWRA DAREK": SCHEME FOR RESTORATION AND ENERGY RETROFITTING WORKS

Recently a new financial scheme managed by the Planning Authority came up with the aim to support the investments in the restoration, conservation and maintenance of Grade 1 and Grade 2 scheduled public buildings and privately owned residential properties located within Urban Conservation Areas (UCAs). The grant scheme is the result of a series of measures announced in the last budget by Government. Under this scheme, first time private buyers of residential Grade 1 and Grade 2 scheduled buildings (including public buildings) may apply for a rebate on 70% of eligible costs of restoration and conservation works (including energy efficiency interventions) on facade and interior up to a maximum of €100,000. The scheme is also open for private owners of residences, located within an Urban Conservation Area (UCA), who wish to carry out restoration and maintenance works on the facade of their old property. Private owners of such residences may apply for a grant of 70% of the works, up to a maximum of €10,000.

With regards to the green initiatives, the scheme supports measures which are earmarked to enhance efficiency in energy consumption of the building and microclimate control. It is

important to highlight that for the purpose of this scheme; the energy interventions should not detract from the conservation status of the property and where visible should sensitively complement the architectural attributes. Examples include measures that encourage better passive micro-climate control and better use of natural light, or the installation of services that may be necessary for modern comfort standards such as damp proofing, double glazing, insulation, UV filters and other green initiatives. The installation of these services must not compromise or negatively impact the heritage value of the heritage building. Works related to these services may need to be included within a Works Method Statement explaining how the installation methodology will avoid damage to the historic fabric.

In addition, to further incentivise residents to take the plunge to restore and retrofit their old property, the Planning Authority has reached an agreement with the Local Council Association for all local councils to make available the professional services of a conservation architect within the locality. The Authority has agreed a capping and will reimburse the local council for fees incurred by the council to assist residents in the submission of a planning application related to this scheme. The Association has also agreed to waive any fees a local council charges for the placement of scaffolding, related to these works for a 3-month period. This scheme which commenced on 16th January 2017 is being made available up to a maximum of €8 million on a first come first served basis up until 30th April 2017. Works must have a planning permit and have to commence after the 1st January 2017. Fiscal receipts would also be required.

PV GRANT SCHEME:

This is a national grant for purchasing photovoltaic panels. According to this scheme who invests in photovoltaic panels will be refunded 50 per cent of the cost (up to a maximum of €2,300) as part of three new subsidy schemes announced by the government for 2017. The EU-funded schemes total €15 million and will run on a first come, first served basis. Successful applicants will then benefit from a feed-in tariff (here below explained) of 16c/kWh. This financial scheme is regulated by the Government Notice No.19, 531 of 24 May 2016 (see text in Annexes below).

FEED-IN TARIFFS SCHEME:

The feed-in tariffs for electricity produced by solar photovoltaic systems (PV systems) were introduced in Malta for the first time on the 10th September 2010. A feed-in tariff is the tariff that is paid to a producer of electricity for the amount of electricity generated and exported to the electricity grid. Prior to 2010, PV systems were being connected and electricity sent to the grid was compensated through a net metering arrangement. This latter arrangement is no longer an option for any PV system approved after the 10th September 2010 of July, 2010. Since their first introduction, various feed-in tariff schemes were introduced through amendments to the Feed-in tariff Regulations.

Currently, according to the updated legislation LN 32 of 2017, for residential and non-residential buildings the Feed-in-tariffs is 15c/kWh for 20 years with a capping of 8.0 GWh (5MWp) per annum and with the condition of having the PV Installed in any location and $\geq 40\text{kWp}$ and $< 1\text{MWp}$.

SOLAR WATER HEATERS GRANT INSTALLATION:

The Malta Resources Authority launched a scheme aiming to further encourage the use of renewable sources of energy for domestic use. The National Scheme provides a grant of 40% up to €400 and is not restricted by social criteria. This is a National scheme that was active from 2011 until 2016. The scheme was further extended to the 31st December 2017 by government notice GN 1427 of 2016 (quoted in annexes).

COHESION POLICY 2014-2020, Operational Programme I - "Fostering a competitive and sustainable economy to meet our challenges" Partly financed through the European Regional Development Fund and the Cohesion Fund (ERDF)

Priority Axis 4: Shifting towards a low-carbon economy

In order to address environmental challenges such as the high reliance on imported fossil fuel oil for energy generation, the carbon emissions footprint and low energy performance in buildings, this OP and specific priority axis 4, enable “the provision of measures to implement a more sustainable energy mix and shift towards cleaner energy whilst supporting climate change objectives”.

Measures under this priority axis aim to increase the share of renewable energy sources through interventions and initiatives for households, enterprises and the public sector. Under this axis are funded the financial incentives that support the purchasing and installation of RES in buildings (namely the ones aforementioned at point 2,3 and 4).

Further measures to enhance energy savings and promote energy efficiency systems and buildings are also pursued to contribute towards EU 2020 and national targets. Here under is quoted an extract from the official Cohesion Policy document specifying the initiatives and projects that can be supported by the priority investment that specifically targets energy efficiency improvements in public building.

Investment priority: 4c - Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings and in the housing sector.

“Under this Investment Priority, the Government will support measures directed towards the installation of renewable energy and energy efficient systems in public property. Furthermore, this priority will support the installation of energy-efficient measures within the housing sector. The beneficiaries will primarily be the Public Administration and the Housing sector within the Maltese territory.

Government will adopt a holistic approach to integrate energy efficiency and renewable technologies with a view to contribute towards the reduction of greenhouse gas emissions and ensure green practices within the public sector. In addition, the Government will seek to promote energy efficiency in housing including retro fitting and other measures that contribute directly towards EE. Within this investment priority, the Government recognises that additional investment in energy efficiency and/or integrated retro-fitting and/or deep renovations (as applicable) of buildings through energy efficiency and renewable technology measures will result in reductions in carbon emissions arising from the energy demand of buildings. Within this context, actions will be stepped up to ensure that current building stock, including public buildings and in housing, will minimise carbon footprint. This will be achieved through the implementation of policy measures that are directed towards buildings to become intrinsically energy and carbon efficient as a result of the materials and technologies used and which would allow for passive and active concepts that will minimise energy demand, and hence carbon emissions.”

These funds are available subject to the successful valuation of project application under the related calls for proposal, which are launched and managed by the Maltese Managing Authority. For this specific priority investment, there is a total budget of 170,000.00 and an annual monitoring is undertaken in order to assess the main indicator: the decrease of the annual primary energy consumption of public buildings by 2023.

2.7 Portugal

At national level, POSEUR - Operational Program for the Sustainability and Efficiency in the Use of Resources emerges as one of the 16 programs created for the operationalization of Portugal 2020 Strategy (a partnership agreement established between Portugal and the European Commission that brings together the performance of the 5 European Structural and Investment Funds - ERDF, Cohesion Fund, ESF, EAFRD and FEAMP - which define the

programming principles which set out the economic, social and territorial development policy to promote in Portugal between 2014 and 2020).

It aims at contributing particularly, to the priority of sustainable growth by addressing the challenges of transition to a low carbon economy based on a more efficient use of resources and the promotion of greater resilience to climate risks and disasters.

Strategy suggests a multidimensional perspective of sustainability based on three strategic pillars that are at the origin of the Program's 3 Investment Axes:

- Axis I - Support the transition to a low carbon economy in all sectors;
- Axis II - Promote adaptation to climate change and risk prevention and management;
- Axis III - Protect the environment and promote resource efficiency.

2.8 Slovenia

The main funding source for energy efficiency measures in public buildings is a **program run by Ministry for Infrastructure**, which has a basis in Long – term strategy for mobilising investments in the energy renovation of buildings. The aim of the strategy is to reach the goals set for buildings sector in Energy efficiency directive (2012/27/EU). The goal for public buildings stock is renovation of 1,8 million m² in period 2014-2023. In 2016, Ministry for infrastructure has set a **program of incentives for deep energy renovation of public buildings**.

It is expected for the period of 2016-2023, a total amount of incentives will reach 115 million EUR of EU Cohesion funds and additional 50 million EUR of government participation. The aim of the program is to mobilise private sector to join in financing energy renovation, expecting 250 million EUR of private, ESCO investment.

Financing of the program is defined more precisely in the Decree on the Implementation of Procedures for the Use of European Cohesion Funds in the Republic of Slovenia in the 2014–2020 programming Period for the 'Investments for Growth and Employment' Objective (UL RS, No 29/15) and in the associated managing authority instructions. Funds are allocated directly to projects of renovation in wider public sector buildings (for buildings founded by the state) and via public tenders (for buildings founded by a municipality).

First tenders were published in fall of 2016, and are continuously published every few months, depending on funds available. The subsidy rate is up to 40% of eligible costs (vat excluded). Project selection criteria is based on three main points: energy efficiency and use of RES improvement, own financial contribution, contribution to social change and raising social awareness. Minimum value of investment required is 500.000 EUR (vat excluded) in case of public tender, in case of public private partnership project, minimum investment is 750.000 EUR (vat excluded). Measures that are eligible in this programme are: Thermal insulation of the building envelope, which includes the replacement or installation of energy efficient windows, energy-efficient heating, cooling and ventilation systems, which include the installation of modern devices and systems for heating, ventilation and cooling and hot water heating, installation of heat exchangers for heat recovery waste or exhaust air, improvements in fans, compressors, installation of frequency controlled pumps, fans and other electric drives, installation of energy-efficient compressors for compressed air and utilization of waste heat generated, installation of heat storage systems, use of renewable resources, which includes the installation of solar thermal systems, biomass boilers and heat pumps for space heating, hot water and technology, installation of cogeneration (CHP) systems, energy management systems installation and public electric vehicle charging station in the vicinity of the building renovated.

2.9 Spain

NATIONAL PLAN FOR THE PROMOTION OF RENTAL'S HOUSING, BUILDING REHABILITATION AND URBAN RENEWAL AND REGENERATION 2013-2016:

According with the objectives determined by the Energy Efficiency Directive to encourage the building sector through urban rehabilitation, regeneration and renovation, Spanish National Government approved the Royal Decree 233/2013 which regulates the National Plan for the Promotion of rental housing, building rehabilitation and urban renewal and regeneration 2013-2016.

The National Plan includes among its objectives: to design grant programs to the rehabilitation of public park of housing improving their energy saving and efficiency energy, in compliance with the European Strategy 2020.

The program's requirements for the public buildings are:

- Buildings built before 1981
- At least 70% of the building have to be used as principal residence of their owners or tenants
- At least 70% of built area must to keep residential use
- Actions must be agreed by the owner's community
- Building Evaluation Report has to be done previously

Beneficiaries:

The program's beneficiaries were housing owners, owners communities, local and regional authorities, etc.

Grants:

The grant maximum amount per building was between 35% - 50% of the eligible cost. It could be increased by 10% in heritage buildings declared as "Sites/Buildings of Cultural Interest".

The grant maximum amount per action to improve energy efficiency was 2.000 € increasing until 5.000 € if the building's energy demand was reduced by 50%)

The grant maximum amount per housing was 11.000 €. 12.100 € if the building was declared as Cultural Interest Estate.

Link:

https://www.fomento.gob.es/MFOM/LANG_CASTELLANO/DIRECCIONES_GENERALES/ARQ_VIVIENDA/APOYO_EMANCIPACION/PLAN_ESTATAL.htm

GRANT PROGRAM FOR THE BUILDING'S ENERGY REHABILITATION (PAREER CRECE)

The main objective of this plan is to encourage and promote actions related with energy saving, energy efficiency, use of renewable energies and reduction of greenhouse gases in built buildings.

The program is managed by the Diversification and Saving Energy Institute. The total amount for this program is 200M €.

The eligible actions must be aligned with one or more of the following typologies:

- Energy efficiency's improvement of building thermal envelop (perimeter walls, roofs, windows, etc.)
- Energy efficiency's improvement of thermal and lighting installations.
- Replacement of conventional energy by biomass energy in thermal installations
- Replacement of conventional energy by geothermal energy in thermal installations

Buildings granted should improve their energy rating, at least, 1 letter measured on the carbon dioxide emissions' scale (kg CO₂/m² year) in relation with previous building's energy rating.

Beneficiaries:

The program beneficiaries were building owners, local and regional authorities, energy services enterprises.

Grants:

For each typology of action the program establishes a non-reimbursable grant that reach between 20% - 30% of action's eligible cost and a refundable loan without interest that will reach between 60% - 70% of actions eligible cost.

Link: <http://www.boe.es/boe/dias/2015/05/05/pdfs/BOE-A-2015-4993.pdf>

SINGULAR PROJECTS FOR LOW CARBON ECONOMY. GRANT PROGRAMME (PENDING APPROVAL)

The Operational Program for Sustainable Growth will provide 506,6M € of ERDF funds for low carbon economy actions in municipalities under 20.000 inhabitants. 70% of the grant program will fund energy efficiency actions meanwhile 30% of them will fund renewable actions.

The Programs' Specific Objectives are:

- Improve energy efficiency in public buildings, infrastructures and public services.
- Increase the use of renewable energy for electricity production and thermal uses in public buildings and infrastructures, promoting small scale energy generation systems close to energy demand areas.
- Promote sustainable urban mobility: clean urban transport systems, public transport, urban-rural connection, cycling transport, pedestrian mobility, electric mobility or development of clean energy supply systems.

Beneficiaries:

Local authorities under 20.000 inhabitants, regional authorities and municipalities' associations under 20.000 inhabitants

Link:

http://www.idae.es/uploads/documentos/documentos_6_FEDER_GENERA_2016_16062016_1e1676c5.pdf

3 Regional funding

Regional funding for energy efficiency measures in public buildings is only relevant in a few of the partner countries of the ENERJ project. The most common practice is the use of EU structural funds, typically under axis 4 -low-carbon economy.

3.1 Greece

The major (and only) regional funding available in the region of Central Macedonia (as in all other Greek Regions) is the **Regional Operational Program of Central Macedonia**.

More specifically, ROP CM foresees as part of its **Axis 4 "Support of the transition towards a low carbon economy in all sectors"**, the Investment Priority 4c: "support of energy performance, smart energy management and use of renewable energy resources in public infrastructures, including public buildings, as well as in the sector of accommodation".

This Priority devotes 5.800.000 € but for all the activities foreseen, including:

- refurbishment of public buildings in view of energy performance improvement

- promotion of demonstration projects
- promotion of central solar heating systems
- promotion of the use of other RES, such as geothermy, etc.
- promotion of high efficiency CHP (i.e. in hospitals)

The above priority is directly linked to Specific Objective 4c1: Increasing the energy efficiency and the development of renewable energy sources in public buildings and public infrastructure

3.2 Italy

The only form of available public funding is that deriving from European structural funds 2014-2020, especially from Axis 4 "Support of the transition towards a low carbon economy in all sectors", the Investment Priority 4c: "support of energy performance, smart energy management and use of renewable energy resources in public infrastructures, including public buildings".

The total financial resource amount is 176.000.000 € for all the activities foreseen, including:

- promoting energy efficiency and use of renewable energy (RES) in companies;
- support for energy efficiency, smart energy management and renewable energy use in public infrastructures, including the public buildings and accommodation sector;
- Promotion of strategies to reduce carbon emissions for all types of territories, especially for urban areas, including the promotion of sustainable multimodal urban mobility and relevant adaption and mitigation measures.

The above priority is directly connected to Specific Objective 4c1: Increasing the energy efficiency and the development of renewable energy sources in public buildings and public infrastructure. For this purpose, 59.000.000 € are allocated, of which 34.000.000 € were intended for local authorities and 25.000.000 € for regional health facilities.

A call for proposals was published, dedicated to the local authorities (34.000.000 €), that was closed in 2016; a total of 459 applications received (MCR didn't participate), the eligible buildings amounted to 279, of which:

- 96 admitted to phase II (energy audits);
- 183 related to projects to improve the energy efficiency performance.

The average cost in energy efficiency intervention, amounted to around 350.000 €.

3.3 Portugal

Alentejo 2020 is the Alentejo Regional Operational Program for the period 2014-2020. With a total allocation of € 1,082.9 million, of which € 898.2 million is ERDF and € 184.7 million is ESF, the Program is composed by four Agendas and 10 Strategic Axes, articulated among themselves.

Agendas:

- ✓ Competitiveness and Internationalization
- ✓ Human Capital
- ✓ Social Inclusion and Employment
- ✓ Sustainability and Efficiency in the Use of Resources

Strategic Axes:

- Axis 1. SME Competitiveness and Internationalization
- Axis 2. Human Capital
- Axis 3. Research, Technological Development and Innovation
- Axis 4. Sustainable Urban Development
- Axis 5. Employment and Economic Enhancement of Endogenous Resources
- Axis 6. Social Cohesion and Inclusion

- Axis 7. Energy Efficiency and Mobility
- Axis 8. Environment and Sustainability
- Axis 9. Institutional Capacity Building and Administrative Modernization
- Axis 10. Technical Assistance

As mentioned, at regional level there are some axes and specific financing measures for energy efficiency in public buildings. It should be noted that for Alto Alentejo region there are available 7.5 million euros ERDF for investment in this area.

3.4 Spain

PROGRAM FOR THE SUSTAINABLE ENERGY DEVELOPMENT OF ANDALUSIA 2017-2020

The program for the Sustainable Energy Development of Andalusia 2017-2020 is managed by Andalusian Energy Agency. It has three main lines: Sustainable Construction, Sustainable SME and smart grids.

The Sustainable Construction line contributes to create the necessary economic ecosystem for the sustainable development of the construction market in Andalusia. To do that, the program envisages the collaboration of private entities, professionals and experts through a decentralised management model that has been used in previous experiences managed by Andalusian Energy Agency.

The private entities, professionals and experts which participate in the program are selected through an open call following the EU's principles of publicity, concurrence, equality and non-discrimination. The procedure is regulated in the programme regulatory bases.

The Program for the Andalusia's sustainable energy development 2017-2020 provide 164,7M € for the Sustainable Construction line. The line contains 38 different action typologies related with energy saving, efficiency energy and renewable energy in public and private buildings located in Andalusia.

The action's typologies funded by the program are:

- Reduction of the energy demand in public and private buildings.
- Promotion of efficient energy facilities in public buildings and infrastructures.
- Improvement of thermal behaviour in building and housing
- Increase natural lighting use in architecture projects
- Promotion of bioclimatic architectural solutions
- Promotion of equipment and facilities for energy self-consumption through renewable energies and high energy efficiency facilities.
- Improvement of equipment and facilities for public services and buildings.
- Improvement of energy efficient in public street lighting installations.
- Smart solutions for the evaluation an energy management in public buildings.
- Promotion of Energy saving measures for public building through energy services enterprises.

Actions developed by public authorities will be addressed towards integral energy rehabilitation and the promotion of nearly zero energy buildings projects.

Beneficiaries:

The beneficiaries of Sustainable Construction's line are SMEs, public and private entities whose can carry out actions to reduce the energy demand and to use the energy in a most intelligent and efficient way.

Grants:

The grant's maximum amount is calculated according to the beneficiary and project's typology. The co-financing rate for local authorities is between 30% - 80%.

Link:

https://www.agenciaandaluzadelaenergia.es/sites/default/files/Documentos/Incentivos/bases_reguladoras.pdf

3.5 All other partner countries

From the partners consortium, Albania, Croatia, Cyprus, Malta and Slovenia do not have any funding mechanisms on a regional level.

4 Local funding

Local funding for energy efficiency measures in public buildings is commonly done through EU co-funded projects where some small investments may be funded, along with energy efficiency studies. Typically local authorities fund energy efficiency projects through their own budgets although in some cases funds may be available in deprived areas.

4.1 Croatia

In Croatia there are no specific local funding opportunities. Public authorities (counties, towns, municipalities) to finance projects related to energy efficiency and the usage of RES in public buildings from their own budget, EU and national funds, bank loans, ESCO's, public-private partnership, etc.

Public authorities in Croatia often finance (in most cases partially) the elaboration of energy certificates, preparation of project designs, the refurbishment of old public and construction of new building from their own budget. Often, their budget is limited, so they are trying to find different ways to co-finance their projects.

The most common way is to apply their projects on tenders issued by The Environmental Protection and Energy Efficiency Fund. The Fund co-finances the energy projects mostly with 40 % of total value (80% for projects implemented in special state concern, projects implemented in the area of the first group of islands and projects implemented in the protected natural areas, or 60% for projects implemented in the area of the second group of islands and projects to be implemented in the highland area). The process of evaluation and selection of tenders is carried out in accordance with the provisions of the Ordinance on the publishing tenders and deciding on the selection of beneficiaries of the Fund for Environmental Protection and Energy Efficiency and the Regulations on the conditions and manner of allocation of resources of the Fund for Environmental Protection and Energy Efficiency, as well as the criteria and standards for the evaluation of applications for allocating Fund. Evaluation of tenders is based on technical and financial criteria. In the last ten years, the Fund has directly led to increased investment in energy in public and private sector. For more than 2,500 energy efficiency and renewable energy project Fund has approved nearly 120 million EUR, which initiated further investments worth over 0.46 billion EUR.

In the scope of Operational Programme "Competitiveness and Cohesion" 2014-2020 there is a budget of 531,810,805.00 EUR dedicated to Priority Axis 4 which funds: promotion of the production and distribution of renewable energy sources, promotion of energy efficiency and renewable energy in small and medium-sized enterprises, support for energy efficiency and renewable energy sources in public infrastructure and housing sector, the development of smart distribution systems with low levels of voltage and promotion of low-carbon strategies in urban areas. Public authorities apply on tenders related to Specific objective "4c1 Reduction of energy consumption of the public sector buildings" (211 810 805,00 EUR) which primarily support measure contributing to the achievement obligation stemming from the Energy Efficiency Directive (2012/27/EU), to renovate (in terms of EE) 3% of the total floor area of

heated and/or cooled buildings owned and occupied by its central government each year to meet at least the minimum energy performance requirements. In terms of specific results it is estimated that having in mind available allocation it would be possible to contribute up to 90% of the goals and measures as set by the National programme for the renovation of public buildings and 3rd NEEAP (i.e. in terms of savings). That means that the expected results (besides achieving mentioned objective of renovation of 3% per year) will encompass decrease of the of energy consumption for cooling/heating of the renovated public buildings for 70% thus achieving annual savings of around 50 GWh. This estimate is based on the assumption that level of ESI funding for renovation of public buildings will be higher than one for the industry/service sector. Such significant expected contribution is due to the fact that largest parts of the indicative allocation for PA4 is dedicated to the investments in the public buildings because on the one hand public buildings present significant potential for energy and costs savings and on the other hand the public sector is expected to take an exemplary role i.e. provide investments and behaviour change that will serve as an example and catalyst for similar investments in other type of buildings. As regards to renewables, significant potential exists in the area of RES with the focus on use of biomass, solar energy and heat pumps. That potential will be targeted through the integrated approach i.e. in a way that RES facilities for generation of energy for the purpose of the specific buildings will be supported along with EE measures, primarily for the heating/cooling purposes.

Beside usage of EU structural funds, public authorities sometimes participate in different transnational and cross-border programmes (most recently Interreg MED, Danube, Europe, Central Europe, Italy-Croatia, Adriatic-Ionian, Horizon, etc.) from which they can finance EE studies, energy certificates and/or project designs for their public building, sometimes even small scale investments in public buildings.

4.2 Cyprus

Most Energy Efficiency related projects in Cyprus are funded by the own funds of Local Authorities. This is also the main reason why energy efficiency upgrading is not the priority of LA due to the financial constraints and the sliced budgets the LA have, as a result of the economic crisis. Some joint funding or joint procurements arise through the collaboration of LA of an area mainly for projects such as street lighting. Further collaboration with EU projects can result in studies, energy audits, EPCs and sometimes small investments on EE in their buildings.

4.3 Spain

Local authorities can promote energy rehabilitation actions in public and private buildings through grants or economic incentives. Municipalities may fund energy rehabilitation actions in public and private building, as long as they comply the General Grant's Law 38/2003 of November 17th. The law requires the approval of a local decree to regulate the grants or economic incentives.

Malaga's Local Authority

Local Decree for the promotion of rehabilitation, regeneration and reparation of existing buildings. The Local Decree establishes the general legal framework to promote the rehabilitation, regeneration and reparation of public and private buildings located in Malaga. Bonus or exemptions in municipal taxes.

Local authorities may establish exemptions or bonuses in some municipal taxes linked to the housing taxes or construction activity taxes

4.4 All other partner countries

From the partners consortium, Albania, Greece, Italy, Malta, Portugal and Slovenia do not have any funding mechanisms at a local level.

5 Other funding schemes

Other funding schemes that can be used for the EE upgrading of public buildings include green loans from local banks, private-public partnerships and Energy Performance Contracting from ESCOs. Most countries have banks that already provide green loans.

5.1 Albania

The EE Fund will itself be limited in capacity and only able to deliver a minority of the funding required. Domestic banks have been involved in the provision of credit lines for energy efficiency building envelope upgrades, appliances and industrial process equipment retrofits with the support of IFIs and international donors. Knowledge and understanding of ESCO projects is however, less widely shared and therefore improved discussions and coordination between the Energy Efficiency Fund and domestic commercial banks for gaining momentum in this sector should be a priority for the next review period.

The exact form, mix and levels of leverage possible will be dependent on the sector with a greater proportion of public funds (i.e. lower rates of leverage of private sector funds) likely to be required for investments perceived as higher risk.

5.2 Croatia

Banks loans

HBOR - Croatian Bank for Reconstruction and Development has a special line of credit program for projects related to environmental protection, energy efficiency and renewable energy sources. HBOR has approved for energy efficiency projects approved about 13,12 mil. EUR of credit funds in the period from 2011 to 2013. These credit funds were granted through commercial banks operating in the Republic of Croatia, directly via HBOR and models of risk sharing in cooperation with commercial banks. Big advantage of this kind of crediting is interest rate of 4%, which is very low compared to Croatian standard rates.

Various commercial banks have provided loans for so called Green Line. One of the most important is from European Bank for Reconstruction and Development, which offers to companies and local governments green loans through various commercial banks. These loans make it easier to invest in EE and projects related to RES. This line is open to the public and private sectors if they want to improve the efficiency of energy use and/or invest in a plant for the production of energy from renewable sources. The amount of grants for projects that meet the criteria of energy saving and/or reduction of CO₂, are from 5% to 10% of loans to businesses subjects and from 10% to 15% of the loan amount for the JLP(R)S. In addition, this line often offers free technical assistance from consultants who will already in the initial phase calculate the possible power savings and evaluate whether projects meet the criteria required for receiving the grants.

Public-Private Partnership

As defined by the Law on Public-Private Partnership NN 78/12 and NN 152/14 what is defined as a long-term contractual relationship between the public and private partners, which is the subject of the construction and/or reconstruction and maintenance of public buildings. The fundamental basis of public-private partnership is the use of private sector expertise and their resources in order to contribute to infrastructure and supply of services of the public sector.

In this way, the public sector initiated the activity of the private sector, taking into account the public interest and quality control. The private partner on the other hand closes financial structure and contributes to the project by offering its core expertise (depending on the type of project that can be design, execution facility or some other type of service). Financial coverage of the private partners is implemented through a concession agreement to the end user or other types of contracts.

The aim of public-private partnership is more economical, effective and efficient production of public goods or services in relation to the traditional way of providing public services. The reasons PPP occurs are:

- due to insufficient expertise of employees of public administration, when it comes to particular professional activities;
- the high cost performance of public affairs by the Group (eg, acquisition of construction machinery).

Characteristics of PPP projects are:

- long-term cooperation contract (maximum 40 years) between the public and private sectors,
- actual redistribution business risk construction, availability and demand (two of the three risk must be on the private partner).

ESCO models

In Croatia are several ESCO companies. ESCO (Energy Service Company) model includes the development, implementation and financing of projects to improve energy efficiency and reduce operation and maintenance. The goal of each project is to reduce the cost of energy and maintenance by installing new and more efficient equipment and optimizing energy systems, ensuring investment repayment through savings achieved over a period of several years, depending on the client and the project. The risk of achieving the savings typically takes ESCO company and provider of energy services, providing guarantees, in addition to innovative projects to improve energy efficiency and reduce energy consumption often offer financial solutions for their realization.

During the payback on energy efficiency, the customer pays the same amount for the cost of energy as before the implementation of the project, which is divided into actual (reduced) cost of energy and the cost to pay off the investment. After payback, ESCO company goes out of the project and all the benefits are left to the client. All projects are tailored specifically to the client and it is possible to extend the project by including new energy efficiency measures by splitting the investment. In this way, the client is able to modernize equipment without investment risk, since the risk of achieving the savings can fall to ESCO company. In addition, after the repayment of the investment client achieves positive cash flow during the repayment period and long-term savings.

5.3 Cyprus

Four Banks in Cyprus are currently financing energy efficiency projects in the form of loans the Bank of Cyprus, the Hellenic Bank, the Cooperative Central Bank and AstroBank. Furthermore, there is a total of 21 ESCOs registered in Cyprus which can undertake EPC for energy efficiency measures in public buildings.

5.4 Greece

Private partnership schemes have only very recently started to operate in Greece, mainly in the form of the replacement of city street lights by ESCO's, in cooperation with the relevant Municipalities.

However, the emerged economic crisis has hampered their dissemination on a global scale, due to the lack of liquidity of ESCO's themselves. In fact. ESCO's in Greece have mainly

limited their operation to the consulting part and not so much to the financing part, probably due to traditional structural weaknesses of the bank sector in the country.

5.5 Italy

The MCR, through financial tools so-called **national incentive decrees**, has installed photovoltaic power plants over 220 school buildings roof for a total of 251 PV plants; 155 of them were implemented by public/private partnership through **project financing tool**. The contract provided that the private society, chosen through a public tender, would invest for the construction of the 155 photovoltaic system plants, and it would get as profit, all government incentives for 18 years and part of the economic value of the energy saving achieved, so as to meet the economic and financial plan drawn up for risk avoidance.

Another good funding scheme was represented by interventions for street lighting that were implemented by **public/private partnership** thanks to project financing tool, in Guidonia Municipality; the intervention was made by an **ESCO society** that invested its own funds and profits from the energy saving achieved by the intervention.

5.6 Malta

"IRRESTAWRA DAREK": SCHEME FOR RESTORATION AND ENERGY RETROFITTING WORKS

Recently a new financial scheme managed by the Planning Authority came up with the aim to support the investments in the restoration, conservation and maintenance of Grade 1 and Grade 2 scheduled public buildings and privately owned residential properties located within Urban Conservation Areas (UCAs). The grant scheme is the result of a series of measures announced in the last budget by Government. Under this scheme, first time private buyers of residential Grade 1 and Grade 2 scheduled buildings (including public buildings) may apply for a rebate on 70% of eligible costs of restoration and conservation works (including energy efficiency interventions) on facade and interior up to a maximum of €100,000. The scheme is also open for private owners of residences, located within an Urban Conservation Area (UCA), who wish to carry out restoration and maintenance works on the facade of their old property. Private owners of such residences may apply for a grant of 70% of the works, up to a maximum of €10,000.

With regards to the green initiatives, the scheme supports measures which are earmarked to enhance efficiency in energy consumption of the building and microclimate control. It is important to highlight that for the purpose of this scheme, the energy interventions should not detract from the conservation status of the property and where visible should sensitively complement the architectural attributes. Examples include measures that encourage better passive micro-climate control and better use of natural light, or the installation of services that may be necessary for modern comfort standards such as damp proofing, double glazing, insulation, UV filters and other green initiatives. The installation of these services must not compromise or negatively impact the heritage value of the heritage building. Works related to these services may need to be included within a Works Method Statement explaining how the installation methodology will avoid damage to the historic fabric. In addition, to further incentivise residents to take the plunge to restore and retrofit their old property, the Planning Authority has reached an agreement with the Local Council Association for all local councils to make available the professional services of a conservation architect within the locality. The Authority has agreed a capping and will reimburse the local council for fees incurred by the council to assist residents in the submission of a planning application related to this scheme. The Association has also agreed to waive any fees a local council charges for the placement of scaffolding related to these works for a 3-month period. This scheme which commenced on 16th January 2017 is being made available up to a maximum of €8 million on a first come

first served basis up until 30th April 2017. Works must have a planning permit and have to commence after 1st January 2017. Fiscal receipts would also be required.

PV GRANT SCHEME:

This is a national grant for purchasing photovoltaic panels. According to this scheme who invests in photovoltaic panels will be refunded 50 per cent of the cost (up to a maximum of €2,300) as part of three new subsidy schemes announced by the government for 2017. The EU-funded schemes total €15 million and will run on a first come, first served basis. Successful applicants will then benefit from a feed-in tariff (here below explained) of 16c/kWh. This financial scheme is regulated by the Government Notice No.19, 531 of 24 May 2016 (see text in Annexes below).

FEED-IN TARIFFS SCHEME:

The feed-in tariffs for electricity produced by solar photovoltaic systems (PV systems) were introduced in Malta for the first time on the 10th September 2010. A feed-in tariff is the tariff that is paid to a producer of electricity for the amount of electricity generated and exported to the electricity grid. Prior to 2010, PV systems were being connected and electricity sent to the grid was compensated through a net metering arrangement. This latter arrangement is no longer an option for any PV system approved after the 10th September 2010 of July, 2010. Since their first introduction, various feed-in tariff schemes were introduced through amendments to the Feed-in tariff Regulations.

Currently, according to updated legislation LN 32 of 2017, for residential and non residential buildings the Feed-in-tariffs is 15c/kWh for 20 years with a capping of 8.0 GWh (5MWp) per annum and with the condition of having the PV Installed in any location and $\geq 40\text{kWp}$ and $< 1\text{MWp}$.

SOLAR WATER HEATERS GRANT INSTALLATION:

The Malta Resources Authority launched a scheme aiming to further encourage the use of renewable sources of energy for domestic use. The National Scheme provides a grant of 40% up to €400 and is not restricted by social criteria. This is a National scheme that was active from 2011 until 2016. The scheme was further extended to the 31st December 2017 by government notice GN 1427 of 2016 (quoted in annexes).

COHESION POLICY 2014-2020 , Operational Programme I - "Fostering a competitive and sustainable economy to meet our challenges" Partly financed through the European Regional Development Fund and the Cohesion Fund (ERDF)

Priority Axis 4: Shifting towards a low-carbon economy

In order to address environmental challenges such as the high reliance on imported fossil fuel oil for energy generation, the carbon emissions footprint and low energy performance in buildings, this OP and specific priority axis 4, enable "the provision of measures to implement a more sustainable energy mix and shift towards cleaner energy whilst supporting climate change objectives".

Measures under this priority axis aim to increase the share of renewable energy sources through interventions and initiatives for households, enterprises and the public sector. Under this axis are funded the financial incentives that support the purchasing and installation of RES in buildings (namely the ones aforementioned at point 2,3 and 4).

Further measures to enhance energy savings and promote energy efficiency systems and buildings are also pursued to contribute towards EU 2020 and national targets. Here under is quoted an extract from the official Cohesion Policy document specifying the initiatives and projects that can be supported by the priority investment that specifically targets energy efficiency improvements in public building.

Investment priority: 4c - Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings, and in the housing sector.

"Under this Investment Priority, Government will support measures directed towards the installation of renewable energy and energy efficient systems in public property. Furthermore this priority will support the installation of energy-efficient measures within the housing sector. The beneficiaries will primarily be the Public Administration and the Housing sector within the Maltese territory.

Government will adopt a holistic approach to integrate energy efficiency and renewable technologies with a view to contribute towards the reduction of greenhouse gas emissions and ensure green practices within the public sector. In addition, Government will seek to promote energy efficiency in housing including retro fitting and other measures that contribute directly towards EE. Within this investment priority, Government recognises that additional investment in energy efficiency and / or integrated retro-fitting and / or deep renovations (as applicable) of buildings through energy efficiency and renewable technology measures will result in reductions in carbon emissions arising from the energy demand of buildings. Within this context, actions will be stepped up to ensure that current building stock, including public buildings and in housing, will minimise carbon footprint. This will be achieved through the implementation of policy measures that are directed towards buildings to become intrinsically energy and carbon efficient as a result of the materials and technologies used and which would allow for passive and active concepts that will minimise energy demand, and hence carbon emissions emitted."

These funds are available subject to the successful valuation of project application under the related calls for proposal, which are launched and managed by the Maltese Managing Authority. For this specific priority investment there is a total budget of 170,000.00 and an annual monitoring is undertaken in order to assess the main indicator: the decrease of the annual primary energy consumption of public buildings by 2023.

5.7 Portugal

In Portugal, Decree-Law 29/2011 establishes the legal regime applicable to the constitution and execution of energy performance contracts that cover the nature of energy efficiency management contracts to be celebrated between public entities and energy services companies. As energy efficiency management contracts we understand the ones that are celebrated between the public entity and the supplier, an Energy Services Company (ESCO), related to an energy efficiency improvement measure in which investments are paid based on the resulting energy savings. They were developed the models of some documents (Specifications and Procedures Program), in order to be used by Public Entities and facilitate the launch of the tender procedures. The financial benefits are distributed between the parties involved and the ESCO guarantees the contracted savings. ESCO also assumes the contractual risk associated with energy savings obtained. For the purpose of monitoring and evaluating the accomplishment of the contracted savings, it is foreseen the need for a Measurement and Verification Protocol (IPMVP) to be adopted.

5.8 Slovenia

Eco Fund, Slovenian Environmental Public Fund is an independent legal entity, with the Ministry of the Environment and Spatial Planning. 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. The financial assistance is offered mainly through soft loans from revolving funds and since the year 2008 through grants.

Considering public buildings, Eco fund currently has two main ways of funding. Grants are given only for investments in new buildings where public education takes place (schools, kindergartens, libraries etc.), constructed as low energy and passive buildings. In case of public building retrofit projects, only loans can be obtained. In comparison with commercial banks, Eco Fund's principal advantages in the market for environmental financing are that it provides soft loans at lower interest rates than prevailing commercial market rates and it is able to lend for significantly longer periods than commercial banks. Current public call for public sector covers especially measures of heating/cooling source installation (heat pumps, biomass, solar thermal, etc.), combined heat and power (CHP) and photovoltaic installations, connection to district heating and lightning system retrofit. Min. investment is 25.000 EUR, max. investment is 2 million EUR. Interest rate is EURIBOR +1,0%, with max. repayment period of 15. years.

There is a steady increase of **public-private projects** of energy renovation of public buildings, but the lack of ESCOs is limiting the use of full potential of renovation projects and is at the same time decreasing the competitiveness. **ESCO** market is relatively undeveloped, with only few reasonably large and investment capable companies. In order to achieve a developed market of ESCOs, a financial support scheme should be established, enabling breakthrough of new companies increasing competitiveness in the market.

5.9 Spain

JESSICA-FIDAE Fund

The F.I.D.A.E. Is a € 123m fund launched by the IDEA that aims to finance sustainable urban development projects that improve energy efficiency and/or reduce renewable energy. It is a Fund co-financed by the ERDF and the IDEA Agency and is operated by the European Investment Bank.

The promoters of these projects may be public entities, energy service companies or private companies belonging to one of the following regions: Andalusia, Canary Islands, Castilla y León, Castilla-La Mancha, Comunidad Valenciana, Extremadura, Galicia, Region of Murcia, Ceuta and Melilla.

The projects financed by this fund should fit to the sectors of buildings, industry, transport and infrastructure of public services related to energy. They also have to be integrated into energy efficiency and energy management projects; In solar thermal, solar photovoltaic and biomass projects; and projects related to clean transport that contribute to the improvement of energy efficiency and the use of renewable energies.

The specific financial conditions applicable to each project are determined by the managers, in accordance with the regulations and the investment strategy of the JESSICA-F.I.D.A.E Fund. And in general it is up to 70% of the eligible expenditure, with the limit of the budgetary allocation available in each autonomous community. Amortization according to the needs of the project, up to 15 years, with 3 deficiencies. The interest rate is Euribor plus margin based on credit rating and guarantees provided. The usual interest rates range from Euribor + 0.75 to Euribor + 4%.

In order to obtain JESSICA-F.I.D.A.E. Funding, project promoters may contact one or more of the three managers selected by the EIB, which includes GED Infrastructure, Banco Bilbao Vizcaya Argentaria and Banco Santander.

Link

<http://www.idae.es/index.php/relcategoria.3957/id.833/relmenu.408/mod.pags/mem.detalle>

<http://www.fempclm.es/files/portalcontenidos/792/documentos/guia.pdf>

Conclusion

Funding energy efficiency projects comes with financial obstacles for public building owners, since funds for energy efficiency (EE) renovations are not readily accessible from the public bodies' annual budget, since they often come with a high cost. Even though the savings that can be achieved are substantial, in order to proceed with such investments, public bodies need to finance these kinds of projects with alternative means rather than their own funds.

One source of funding may come from European funding regarding energy efficiency (EE) measures in public buildings, as well as RES penetrating in public buildings. The general financing opportunities come from European Structural and Investment Funds (ERDF, Cohesion Fund), European Funding Programmes (LIFE, Horizon 2020 etc.), Project Development Assistance (ELENA, JASPERS etc.) and Financial Institutions Instruments (EFSI, EEEF etc.). These may provide co-financing in some cases reaching 100%, but also as low-rate loans.

At a National level, most of the partner countries have used the Cohesion fund along with ERDF for energy upgrading the public building stock. Furthermore, most of the countries have established National Funds providing Grant schemes for the energy efficiency projects in public buildings. In Albania, the Energy Efficiency Law requires the setup of a fund for Energy Efficiency measures. In Croatia, the Ministry of regional Development and EU funds, coordinate the 'Competitiveness and Cohesion' Operational Programme which includes measures for the EE of public buildings. Furthermore, two National funds are established, 'The Croatian' and the 'Third National Action Plan' which contribute to the reconstruction of public buildings with better EE and the penetration of RES. Additionally, the EPEEF collects and invests extra budgetary resources in programmes and projects of environmental and nature protection, EE and RES. In Cyprus, the Ministry of Energy, Commerce, Industry and Tourism has created a funding scheme through the 'RES and EE' Fund, for co-financing energy renovations in public buildings, offices and households with the target of reaching an EPC class of at least B. Moreover, a scheme for the installation of PVs is in place for all kinds of buildings. In Greece, a two stage National EE Programme for the energy performance of public buildings and selected systems in households. Furthermore, a Green Fund is in place that uses the fines collected relating to environmental issues and redistributes the money into eco-friendly measures. Also, Local Authorities have access to structural funds. In Italy, a fund for improving the EE of schools is in place along with a € 900 mil fund for co-financing EE measures in public authorities (€ 200 mil), businesses and individuals. In Malta, a grant scheme is in place for the restoration of buildings in Urban Conservation Areas, managed by the Planning Authority. Governmental grants include a € 2,300 grant for the installation of PVs and the 40% co-financing for the installation of solar thermal. Moreover, funds are available for public buildings from the ERDF for projects regarding EE, smart energy management and RES. In Portugal, the Operational Programme for Sustainability and Efficiency in the use of Resources was established by the Government and the European Commission and includes the 5 European Structural investment funds (ERDF, Cohesion Fund, ESF EAFRV and FEAMP) for low-carbon economy, promotion of resource efficiency, adaptation to climate change and protection of the environment. In Slovenia, the Ministry of Infrastructure runs a fund providing up to 40% subsidy for EE projects in public buildings, where until 2023 € 115 mil will be invested by the EU Cohesion Fund and € 50 mil by the government. In Spain, a Governmental grant is in place for EE refurbishment in public and private buildings co-financing 35-50% of the investment. Additionally, a € 200 mil grant is in place for EE refurbishments on specific measures for building owners, local and regional authorities providing a 20-30% grant and a 60-70% loan without interest. A grant of € 506.6 mil is approved by the ERDF for municipalities under 20,000 inhabitants, with 70% for EE and 30% for RES.

Regional funding for EE measures in public buildings is only relevant in a few of the partner countries of the ENERJ project. The countries that use the EU structural funds for regional EE measures, typically do it under axis 4 – low-carbon economy. In Greece, the ROP CM EU structural fund devotes € 5,8 mil on public buildings energy refurbishments, the use of RES and high efficiency CHP. In Italy, € 176 mil have been made available from EU structural funds for axis 4, for increasing the EE and RES penetration, with € 34 mil made already available for Local Authorities and € 34 mil for health centres. In Portugal, the Alentejo Regional Operation Programme has € 1,082.9 mil available (€ 898.2 mil from ERDF and € 184.7 mil from ESF) for 10 strategic axes including sustainability and efficiency in the use of resources where € 7.5 mil from ERDF are allocated for such investments. In Spain, the Sustainable Energy Development Programme of Andalusia includes sustainable construction and RES for private and public buildings and the grant for local authorities is 30%-80%.

Local funding is also limited in most of the partner countries of the project ENERJ. In most cases EE measures in local authorities are funded through their own budget and sometime through EU co-funded projects that local authorities participate, where there is a possibility of financing EE studies, energy audits, EPC of buildings and small investments. In Croatia, the Environmental Protection and EE Fund is co-financing projects at different percentage levels (40%, 60% or 80%) depending on the area of the project with € 120 mil already approved and € 460 mil of further investments initiated. Moreover, within the Operational Programme 'Competitiveness and Cohesion' a budget of € 532 mil is dedicated in Priority axis 4, with € 212 mil to be allocated for the yearly 3% energy upgrading of public buildings. In Spain, municipalities can receive grants, as long as they comply with the Law 23/2003 which requires the approval of a local decree. Additionally, in Malaga the local decree establishes the legal framework for energy refurbishments providing bonus exemptions in Municipal taxes.

Other funding schemes that can be used for the EE upgrading of public buildings include green loans from local banks, private-public partnerships and Energy Performance Contracting from ESCOs. Most countries have banks that already provide green loans and in the case of Croatia where these loans are offered by the European Bank for Reconstruction and Development, these loans include the free technical assistance for the evaluation of the proposed projects. ESCOs are already established in most of the partner countries, but in some cases not many projects are undertaken mainly due to the lack of funds from those companies who take a more consulting role.

The table below summarises the funding tools found in the partner countries of project ENERJ. The red indicates the sections where no tools are present in the respective countries, the grey where tools are partly present and the green where tools are present, with the numbers indicating the number of tools present.

| | Albania | Croatia | Cyprus | Greece | Italy | Malta | Portugal | Slovenia | Spain |
|-----------------------------|---------|---------|--------|--------|-------|-------|----------|----------|-------|
| National Funding | 1 | 3 | 4 | 4 | 2 | 5 | 3 | 1 | 3 |
| Regional Funding | | | | 1 | 1 | | 1 | | 1 |
| Local Funding | | | | | | | | | 1 |
| Bank Loans | | | | | | | | | |
| Public-private partnerships | | | | | | | | | |
| ESCO's | | | | | | | | | |
| Other Funding | | | | | 1 | 3 | | | 1 |

| | |
|----------------|--|
| present | |
| partly present | |
| not present | |

There is a strong link in the way the public bodies implement EE measures in public buildings across the partner countries of the ENERJ project. It is common for governments to create funds for financing EE measures and in most of the countries grant schemes have also been established in order to mobilise the energy efficiency upgrades, co-financing the projects. Loans with low interest rate seem to also be a common way in financing such projects across the partner countries. Furthermore, local authorities seem to benefit in their planning for energy efficiency by creating a Sustainable Energy Action Plan that can aid them in decision making of the energy upgrades to be undertaken.