



EnVision 2020

COMPENDIUM OF BEST PRACTICES

D5.1, WP5, EnVision`2020

Summary of the collected good practices in
financing the introduction of RES and new forms
of energy
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Chapter 1. Executive Summary

The EnVision`2020 project aims to analyze the current situation of the EU cities in SEE; to summarize the data provided by the countries for their energy sectors, energy sources and energy policies on local, regional and national levels. It includes recommendations for the future development of the energy efficiency field in the SEE cities.

The present document is a compendium of all the Consortium Partner's good practices and examples in financing the use of RES and new forms of energy.

The overall content of the document is composed regarding:

- a) Innovative financial instruments
- b) Public procurement practices
- c) Public-private partnership
- d) Publicly owned enterprises

Its structure is suggested to summarize the positive attributes of good practices into a review section that will provide a synthesis of conclusions and recommendations towards interested stakeholders. This approach is considered as a base in reaching the objectives of the presented document.

Chapter 2. Introduction

The EnVision`2020 project is an EU co-funded project, that aims to facilitate the transfer of know-how and the exchange of good practices and policies between partners from South East Europe towards reducing pollution, improving energy efficiency and use of energy from renewable sources (in accordance with the EU 2020 strategy for energy). The project is divided into 7 WP (Work Packages). The Good Practice Guide on identifying different financial instruments is one of the outputs under WP5 (Work Package 5).

Within this work package the main operational activities will focus on:

1. Assessing the financial framework of each SEE city in regard to the greening of the local economy through the employment of RES and new forms of energy;
2. Identifying the characteristics of new financial instruments to be put in place in order to support investments in RES and new forms of energy;

Starting from the outcomes of the foresight exercise, an analysis of the investments needed for greening the local economy will be carried out for each municipality, and the most suitable financing or co-financing sources will be identified with the support of a task force group on innovative financial instruments. The results of the selection shall be publicly available and accessible.

The Compendium consists of 8 main chapters. In the beginning, a brief introduction of the EnVision`2020 project and the partners involved is made. After that, brief definitions for each of the 4 types of financial instruments will be presented. Special attention will be given on the issue of sources of information and the used methodology for collecting the good practices. Then the objectives of this document will be set and a summary of the Collected Good Practices will be provided for each of the instruments in each partner country. The next section will outline the characteristics of the presented good practices and also analysis and evaluation of their application in other SEE countries. The compendium will provide the necessary recommendations for using these types of financial instruments. Finally the compendium will provide an indicative list of all good practices included in the document and a brief conclusion with some of the most important accents. In the end a list of all used sources will be placed in the References section.

Chapter 3. Brief definitions:

3.1 Innovative Financial Instruments

The main features of the financial innovations can be listed as follows:

- 1) they can be entirely new solutions or just traditional instruments in which new elements of construction have been introduced improving their liquidity and increasing the number of their potential applications as they are better suited to the circumstances of the time,
- 2) they can be used as substitutes to the traditional financial instruments improving the financial situation of the business entities using them,
- 3) they cannot be easily assigned to one particular segment of the financial market,
- 4) they can be used to hedge against the intensive volatility of the market parameters,
- 5) they can be used in a form of complex instruments including several simple, traditional financial instruments,
- 6) they can be used in a form of new financial processes or techniques or new strategies that primary use these new products.

It is worth adding that if any financial instruments other than traditional shares and straight bonds, can be regarded as the financial innovations, these new developments can be divided into two categories:

- (1) equity-linked innovations and (2) debt-linked innovations.

Other popular approach to the financial innovations definition states that they can be categorized as:

- (1) the product innovations,
- (2) the process innovations and
- (3) the risk- shifting innovations (Llewellyn, 2009, p. 4).

The first category – the product innovations - includes new financial instruments, contracts, techniques and markets. The next group – the process innovations are connected with improvements in the processes of securities distribution, transaction payments or assets valuation. On the other hand, the risk-shifting innovations are created by the separation or combination of various individual instruments in order to obtain new instruments with different risk characteristics. In this last group of financial innovations, there are distinguished two categories:

- (1) the instrument innovations and (2) the post-contract innovations (Llewellyn, 2009, p. 5).

In case of the first type, a new instrument is designed and created with a purpose to achieve a particular set of characteristics (so they can be described as the ex-ante innovations). In the second type of innovations – the risk characteristics is changed after the original instrument is used (so they can be defined as the ex-post innovations). These are the most popular approaches towards the definition of the financial innovations presented in the financial literature. However, the new definition of the financial innovations can be developed based on the definition of the financial system.

This broad definition can describe financial innovations as changes in the functioning and the new solutions and developments in:

- (1) financial markets,

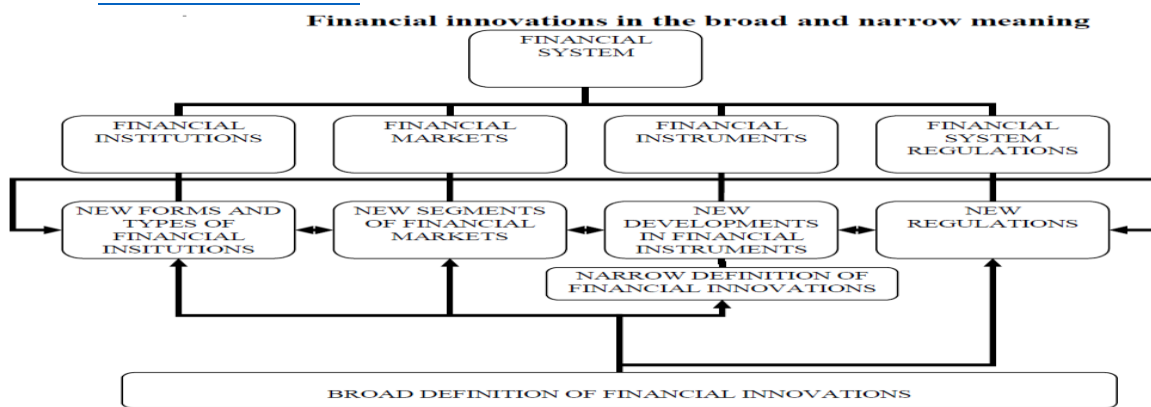
- (2) financial institutions,
- (3) financial instruments

and (4) regulations connected with their activity (see fig. 1).

The relationship between these groups of financial innovations is multidimensional and can be described as the spiral of innovations. This means that the new financial institutions create the new financial instruments (products and services) that are traded in the new financial markets and these new solutions require shortly the new regulations. Changes in the market conditions together with the changes in the legal environment lead to the formation of new instruments and then foundation of the new markets and institutions specializing in these new developments.

Figure 1: Financial innovations in the broad and narrow meaning

Source: www.econstor.eu



Source: Own elaboration

Thus, to summarize the conclusion – the term “financial innovations” can be applied in two meanings (see figure 1):

- 1) according to the narrow approach, the financial innovations are defined as any new developments in financial instruments (entirely new instruments, combination of traditional instruments, modification of traditional instruments, new application of existing instruments, etc.),
- 2) according to the broad approach, the financial innovations include any new developments in any elements of the financial system (markets, institutions, instruments and regulations). In addition, the word “new” means that these innovations are perceived as novelties for the entity implementing them, not necessary objectively new for other participants of the financial system.

3.2 Public Procurement Practices

Government procurement, also called public tendering or public procurement, is the procurement of goods and services on behalf of a public authority, such as a government agency. With 10 to 15% of GDP in developed

countries, and up to 20% in developing countries, government procurement accounts for a substantial part of the global economy.¹

To prevent fraud, waste, corruption or local protectionism, the law of most countries regulates government procurement more or less closely. It usually requires the procuring authority to issue public tenders if the value of the procurement exceeds a certain threshold.

Government procurement regulations normally cover all public works, services and supply contracts entered into by a public authority. However, there may be exceptions. Certain politically or economically sensitive sectors is government spending, such as public health, energy supply or public transport, may also be treated differently.²

The intention of the GPA is to ensure that government decisions regarding government purchases of goods and services do not depend upon where the good is produced or the service rendered, nor upon the supplier's foreign affiliations.

Here are some of the different types of public procurement and their definitions:

1. Definition of public procurement

Government or public procurement refers generically to the formal process through which official government agencies obtain goods and services, including construction services or public works.¹ Within the GATT/WTO system, public procurement refers to the process by which a government obtains the use of or acquires goods or services for governmental purposes and not with a view to commercial sale or resale, or use in the production or supply of goods or services for commercial sale or resale.

When a government buys goods and services there are typically several competing objectives or 'desiderata' operating within the procurement system. Policy objectives range from aims as diverse as wanting to promote competition, customer satisfaction and integrity to distributing wealth, avoiding risk and spurring innovation. A trade off is often inevitable because there may be little compatibility among the various objectives that public procurement policy can potentially serve. Demanding the best price for the best quality available may mean choosing a large foreign supplier over a small local firm. Further, the expertise required to identify the best overall value, as opposed to the best purchase price alone, will detract from short-term efficiency because it will require additional time and resources, from training in market research to contract negotiation.

Different policy objectives emerge depending on the type of procurement a government undertakes. Public procurement can for this analytical purpose be subdivided into three different varieties: direct, co-operative, and catalytic. Direct procurement refers to situations where a government agency or representative makes purchases for use by that body, and where the need for the product is largely confined to the public. Much of the procurement carried out by national defense agencies, such as the procurement of military vehicles and hardware, would fall into the category of direct procurement.³

Co-operative procurement corresponds to situations where the public entity makes purchases of innovations also sought after by segments of the private sector. An example of such purchases would be government vehicles using alternative fuels or drive systems, where it is foreseeable that there could also be a private market for these goods.

¹ [Jump up](#), [Global Trade Negotiations Home Page](#) at [Harvard University](#), accessed 18 December 2006

² [Jump up to:](#) ^a ^b ^c Prieß, Hans-Joachim; Harvey, Diana; Friton, Pascal. "Global Overview". *Prieß (2012)*: 3–7.

³ Source: Communication (COM (2008) 400) "[Public procurement for a better environment](#)"

In such a situation, it is possible that public procurement of a product that may be innovative, environmentally friendly, or both, could also spur demand and adoption in the private market, leading to a greater diffusion of this technology. Finally, catalytic procurement refers to situations where the ultimate users of the technology will be private industry or consumers, and the state merely promotes the development of this innovation financially, such as might be the case for innovative kitchen appliances. Here, the government may have identified an un-served niche in the market and sought to bring about the development of superior technologies to pursue certain policies, like greater home energy efficiency.

Given the size of procurement markets, public procurement policies and objectives can play a powerful role in channeling the energies and attention of the market. This is the intellectual basis behind structuring a public procurement system to promote certain ends or values.

2. Definition of public procurement for green innovation

Public procurement for green innovation may be defined as public procurement which results in ‘the production, assimilation or exploitation of a product, production process, service or management or business method that is novel to the organization (developing or adopting it) and which results, throughout its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resources use (including energy use) compared to relevant alternatives’. Note that this definition is not intended to include, for example, an organization improving the environmental impact of its facilities by adopting a new process already widely known in the market but, as used in this study, would include the adoption of an existing environmentally friendly process that has not yet achieved a sustainable market presence, thereby contributing to the diffusion of this innovation. Public procurement for green innovation may represent an opportunity to reduce the environmental impact of government purchases and promote a greener economy by placing an emphasis in the procurement process on those products that offer innovative solutions to environmental products but have not yet gained wide market diffusion, and potentially represents an important policy tool.

Public procurement for green innovation represents a synthesis of two related concepts. These two procurement regimes – green public procurement and the public procurement of innovation – have a wider base in the literature on public procurement.

3. Definition of green public procurement

Green public procurement is defined by the European Commission as ‘... a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured’.

Clearly a redirection of government purchasing could create large markets for clean power, electric vehicles and efficient buildings, as well as for more sustainably produced furniture, paper, cleaning supplies, uniforms, food and services. If a government buys green goods and services, it would likely serve to drive down marketplace prices adding momentum to the private sector.

By using environmental criteria public authorities can buy electricity, transport services, office IT equipment, food and catering services and many other goods and services that contribute to the reduction of environmental impacts.

Green public procurement does not require elevating ecological concerns above all others, and may instead involve a focus on life-cycle costs rather than merely purchase cost (ex. encouraging government agencies to

include in the total cost of a vehicle the cost of fuel over its lifetime, rather than merely its purchase cost, and to use this data when selecting among competitive tenders.

It is important to note that the difference between the ‘public procurement for green innovation’ and ‘green procurement’ lies in the definition of ‘innovation’. Public procurement for green innovation involves the purchase of green products or technologies that do not yet have a significant market – those products with unrealized economic potential. More than simply taking environmental impacts into consideration in the procurement process, public procurement for green innovation is about giving preference to those products that offer innovative solutions to environmental problems, or innovative methods of lessening the environmental impact of the activity for which the government is making its purchase. It is both about changing today’s technology to make it more environmentally friendly, and also about propelling broader innovation leading to benefits, which will materialize in the future.

The concept of GPP has been widely recognized in recent years as a useful tool for driving the market for greener products and services and reducing the environmental impacts of public authorities` activities. GPP concerns both:

- **Contracting authorities**: National, regional or local authorities and so-called bodies 'governed by public law'. These are bodies established for the specific purpose of meeting needs in the general interest, but without an industrial or commercial character and for the most part financed, administered or supervised by public authorities. (see Article 1 of [Directive 2004/18/EC](#))
- **Contracting entities**: All entities operating in so-called 'special sectors', namely: water, energy, transport and postal services. Even if the operating entities in those sectors are not necessarily any longer public authorities or bodies governed by public law, they provide public services and remain fairly dependent on public money. They are therefore often subject to similar, albeit less restrictive, rules. (see the preamble to [Directive 2004/17/EC](#)).

3.3 Public-Private Partnerships

A public-private partnership (PPP) refers to arrangements, typically medium to long term, between the public and private sectors whereby some of the services that fall under the responsibilities of the public sector are provided by the private sector, with clear agreement on shared objectives for delivery of public infrastructure and/ or public services. PPPs typically do not include service contracts or turnkey construction contracts, which are categorized as public procurement projects, or the privatization of utilities where there is a limited ongoing role for the public sector.

PPPs combine the skills and resources of both the public and private sectors in new ways through sharing of risks and responsibilities. This enables governments to benefit from the expertise of the private sector, and allows them to focus instead on policy, planning and regulation by delegating day-to-day operations.

In order to achieve a successful partnership, a careful analysis of the long-term development objectives and risk allocation is essential. In addition, the legal framework must adequately support this new model of service delivery and be able to monitor and regulate the outputs and services provided. A well-drafted PPP agreement would be informed by both the laws of the country and international best practices to clearly delineate risks and responsibilities.

The financial crisis of 2008 has brought about renewed interest in PPP in both developed and developing countries. Facing constraints on public resources and fiscal space, while recognizing the importance of investment in infrastructure to help their economies grow, governments are increasingly turning to the private sector as an alternative additional source of funding to meet the funding gap. While recent attention has been focused on fiscal leveraging of projects, governments look to the private sector to help them deliver infrastructure for a number of other reasons:

- Exploring PPPs as a way of introducing private sector technology and innovation in providing better public services through improved operational efficiency
- Incentivizing the private sector to deliver projects on time and within budgets
- Imposing budgetary certainty by setting present and the future costs of infrastructure projects over time
- Utilizing PPPs as a way of developing local private sector capabilities through joint ownership with large international firms, as well as sub-contracting opportunities for local firms in areas such as civil works, electrical works, facilities management, security services, cleaning services, maintenance services, etc.
- Using PPPs as a way of gradually exposing state owned enterprises and government to increasing level of private sector participation (especially foreign) and structuring PPPs in a way so as to ensure transfer of skills leading to capacitated entities that can eventually export their competencies by bidding for projects/ joint ventures
- Creating diversification in the economy by making the country more competitive in terms of its facilitating infrastructure base as well as giving a boost to its business and industry associated with infrastructure development (such as equipment, support services, etc.)
- Supplementing limited public sector capacities to meet the growing demand for infrastructure development
- Extracting long-term value-for-money through appropriate risk transfer to the private sector over the life of the project – from design/ construction to operations/ maintenance

Some of the Potential Risks of Public Private Partnerships

There are a number of **potential risks associated** with Public Private Partnerships:

- Development, bidding and ongoing costs in PPP projects are likely to be greater than for traditional government procurement processes - the government should therefore determine whether the greater costs involved are justified. A number of the PPP and implementation units around the world have developed methods for analyzing these costs and looking at Value for Money, e.g., UK Treasury.
- There is a cost attached to debt – While private sector can make it easier to get finance, finance will only be available where the operating cash flows of the project company are expected to provide a return on investment (i.e., the cost has to be borne either by the customers or the government through subsidies, etc.)
- Some projects may be easier to finance than others (if there is proven technology involved and/ or the extent of the private sectors obligations and liability is clearly identifiable), some projects will generate revenue in local currency only (e.g. water projects) while others (e.g. ports and airports) will provide currency in dollar or other international currency and so constraints of local finance markets may have less impact
- Some projects may be more politically or socially challenging to introduce and implement than others - particularly if there is an existing public sector workforce that fears being transferred to the private sector, if

significant tariff increases are required to make the project viable, if there are significant land or resettlement issues, etc.

- There is no unlimited risk bearing – private firms (and their lenders) will be cautious about accepting major risks beyond their control, such as exchange rate risks/risk of existing assets. If they bear these risks then their price for the service will reflect this. Private firms will also want to know that the rules of the game are to be respected by government as regards undertakings to increase tariffs/fair regulation, etc. Private sector will also expect a significant level of control over operations if it is to accept significant risks
- Private sector will do what it is paid to do and no more than that – therefore incentives and performance requirements need to be clearly set out in the contract. Focus should be on performance requirements that are out-put based and relatively easy to monitor
- Government responsibility continues – citizens will continue to hold government accountable for quality of utility services. Government will also need to retain sufficient expertise, whether the implementing agency and/ or via a regulatory body, to be able to understand the PPP arrangements, to carry out its own obligations under the PPP agreement and to monitor performance of the private sector and enforce its obligations
- The private sector is likely to have more expertise and after a short time have an advantage in the data relating to the project. It is important to ensure that there are clear and detailed reporting requirements imposed on the private operator to reduce this potential imbalance.
- A clear legal and regulatory framework is crucial to achieving a sustainable solution
- Given the long-term nature of these projects and the complexity associated, it is difficult to identify all possible contingencies during project development and events and issues may arise that were not anticipated in the documents or by the parties at the time of the contract. It is more likely than not that the parties will need to renegotiate the contract to accommodate these contingencies. It is also possible that some of the projects may fail or may be terminated prior to the projected term of the project, for a number of reasons including changes in government policy, failure by the private operator or the government to perform their obligations or indeed due to external circumstances such as force majeure. While some of these issues will be able to be addressed in the PPP agreement, it is likely that some of them will need to be managed during the course of the project.

3.4 Publicly Owned Enterprises

A **government-owned corporation, state-owned company, state-owned enterprise, state-owned entity, state enterprise, publicly owned corporation, government business enterprise, commercial government agency, public sector undertaking or parastatal** is a legal entity that undertakes commercial activities on behalf of an owner government. Their legal status varies from being a part of government to stock companies with a state as a regular stockholder. There is no standard definition of a government-owned corporation (GOC) or state-owned enterprise (SOE), although the two terms can be used interchangeably. The defining characteristics are that they have a distinct legal form and they are established to operate in commercial affairs. While they may also have public policy objectives, GOCs should be differentiated from other forms of government agencies or state entities established to pursue purely non-financial objectives.

Government-owned corporations are common with natural monopolies and infrastructure such as railways and telecommunications, strategic goods and services (mail, weapons), natural resources and energy, politically sensitive business, broadcasting, demerit goods (alcohol) and merit goods (healthcare).

GOCs can be fully owned or partially owned by government. As a definitional issue, it is difficult to determine categorically what level of state ownership would qualify an entity to be considered as "state-owned", since governments can also own regular stock, without implying any special interference. Government-owned or state-run enterprises are often the result of corporatization, a process in which government agencies and departments are re-organized as semi-autonomous corporate entities, sometimes with partial shares listed on stock exchanges.

The term 'government-linked company' (GLC) is sometimes used to refer to corporate entities that may be private or public (listed on a stock exchange) where an existing government owns a stake using a holding company. There are two main definitions of GLCs are dependent on the proportion of the corporate entity a government owns. One definition purports that a company is classified as a GLC if a government owns an effective controlling interest (>50%), while the second definition suggests that any corporate entity that has a government as a shareholder is a GLC.

A quasi-governmental organization, corporation, business, or agency (parastatal) or a "quasi-autonomous non-governmental organization" (quango) is an entity that is treated by national laws and regulations to be under the guidance of the government but separate and autonomous from the government. While the entity may receive some revenue from charging customers for its services, these organizations are often partially or majorly funded by the government. They are usually considered highly important to smooth running of society and are sometimes propped up with cash infusions in times of crisis to help surmount situations that would bankrupt a normal privately owned business. They may possess law-enforcement authority, usually related to their functions.

A *public company* is able to raise substantial amounts of capital in the public capital markets, trading ownership shares as well as control of the company. At the same time, public companies are subject to higher levels of costly reporting, regulations, and public scrutiny. For example, publicly traded companies must publish annual reports, filed with the SEC, and disclose detailed information about its finances and business activities, including proprietary information that may help competitors. In addition, changes within the company, such as the capital structure of the company, need to be approved by the shareholders.

Chapter 4. Methodology - Purposes and Objectives of the Compendium

The present document highlights the work of the task force group, composed of staff of the project partners, and it is based on the methodology for identifying best practices in financing the introduction of RES and new forms of energy.

According to the methodology the compendium summarizes the collected and analyzed the practices received through a desk research and through the data collection done by the EnVision`2020 consortium partners. The minimum requested best practices by each partner are five.

In order to achieve the purposes of activity 5.1 and comply with the content and quality requirements of the EnVision`2020 project, the compendium takes into account, not only the implemented practices, but also possible innovative practices, selected from the institutional, legal and economic framework in place in the countries of the EnVision`2020 consortium.

The main objectives of the Compendium are the following:

- Highlight the practices that have been proven, or are expected to be highly successful in financing the introduction and the use of RES and new forms of energy.
- Provide information and/or insights regarding the ability to duplicate, transfer and adapt instruments and practices between countries. This implies that the research effort has to be directed towards locating features that would reduce transferability and if possible provide suggestions for reasonable adjustments.

The present document includes only the precise good practices for the financial instruments as they respond to the financing needs of potential users and businesses, a requirement laid in activity 5.2. These needs have been identified in the **consultancy workshops** conducted in all the cities involved in the project, by engaging the local institutional banks and the representatives of the different EU financing facilities.

The validation of the collected good practices will be included in other two workshops organized for completing the purposes of WP 5. A second round of workshops will present the financial framework and the new financial instruments and will verify their relevance against the perspectives of the business and financing communities in the corresponding partnering city.

The Compendium has to be included in the agenda of the organized workshops as a basic document consists of the best practices of all partners and can be used as a base for in-depth analysis and comparisons among participants and guests.

Chapter 5. Summary of the Collected Good Practices

The current chapter presents the collected good practices in tables as sent by each partner. The citations are taken from the completed templates of questionnaires prepared by ARC FUND and SOFENA in sub-activities 5.1 and 5.2 of WP5 under project EnVision`2020.

The responsibility for the included information in this chapter belongs to the respondents and their interviewers, cited in the Contacts section of each good practice table.

5.1 Innovative Financial Instruments

Potenza and Fermo	White Certificates or Energy Efficiency Certificates (CERTIFICATI BIANCHI):
Description of the best practice № 1	<p>The promotion of energy conservation through the mechanism of the Energy Efficiency Certificates has been provided by the Ministerial Decrees of 20 July 2004. The decrees stipulate that mandatory objective savings are set each year for the distributors of electricity and natural gas, which therefore, must return annually to the state a certain number of shares (determined according to the size of the company, or to the number of customers served).</p> <p>The energy efficiency certificates are obtainable through the execution of measures to improve energy efficiency in end uses. The interventions are achievable by the above mentioned parties (called “obligated parties”) or by energy service companies credited to the appropriate register. Where the parties responsible they are unable to obtain the numbers of shares determined by direct actions, they acquire the necessary qualifications to perform their obligation by these companies.</p> <p>The possible actions are of various types: Interventions based on the default tabs (for example, the replacement of lamps or the installation of inverters on pumping systems) – there are 40 cards in force; Interventions proposed directly by the parties, in which case, the applicant must establish not only the action but the method for measuring and calculating the savings achieved.</p> <p>In additions to actions for saving energy are also obtained licenses for multiple operations for renewable energy sources and for the production of electricity, both for the production of thermal energy.</p>
Results/Success	<p>The possibility to exchange the Energy Efficiency Certificates allows distributors to comply with the obligation imposed by the decrees at the lowest cost, given a choice between making direct intervention in the market to buy or an equivalent amount of certificates. The sale of white certificates can be through bilateral contracts or in a specific market established by Electricity Market Operator (GME).</p>
Recommendations	n/a
Contacts	www.gse.it and www.gme.it

Potenza and Fermo	Thermal bill (CONTO TERMICO)
Description of the best practice № 2	<p>Support and promote the protection of the environment to start the use of renewable energy sources. With this in mind, public and private actors should promote the achievement of systems and technologies RES and create a system of financial and technical support that raises awareness of the territory to energy saving and the use of alternative energy with the aim of promoting a network of operators in sector.</p> <p>The main national incentives are thermal bill and white certificates (they are alternative to each other).</p> <p>The thermal bill was introduced in 2013, and it is applicable to actions relating to the building (envelope and plants). It is particularly associated with interventions in third-party financing, so it is a good solution in case of lack of one's own financial resources. The allowed interventions concern the energy efficiency of existing buildings, with a financial contribution up to 40% of eligible expenditure incurred and all actions related to small plants for the thermal energy production from renewable sources and high-efficiency systems.</p>
Results/Success	<p>In Basilicata and in Marche Region there has been an increasing request of thermal bill but most of them are related to the private sector.</p> <p>These financial instruments are cost-effective also because the Public administration do not benefit from tax deductions which are provided, instead, for private investments. Taking advantage of white certificates, users get an economic return and energy savings further shortening the payback period.</p>
Recommendations	<p>In order to overcome the above mentioned bottlenecks it is necessary to:</p> <ul style="list-style-type: none"> • increase the level of awareness of the public administration; • streamline the process for submitting projects and introduce new performance indicators in the evaluation and certification of energy savings; • bring together the desire for simplification with the need to strengthen the monitoring and verification activities for the proper disbursement of white certificates promote the financial autonomy of the Public Administration for investments in energy efficiency, with the creation of an "Action channel" which should not be subject to the constraints of the Stability Pact.
Contacts	www.enea.it and ww.gme.it
Potenza	Guarantee Fund ERDF OP Basilicata 23007 -2013:
Description of the best practice № 3	<p>The investments for the production of energy from renewable sources can be obtained from the Guarantee Fund ERDF OP Basilicata 23007 -2013. These measures are to support SMEs which are guaranteed up to 80% of the bank loan for the investment. The warranty is free and the fund is managed by Sviluppo Basilicata. This is also due to the difficulties, especially in recent years, access to bank credit and the decline in the profitability of such investments.</p> <p>It should be pointed out, however, that cannot be financed wind farms.</p>

	<p>A limit is the requirement to provide at least 25% coverage of the investment with its own funds. A problem is the unwillingness of the banks to grant the credit and exclusion of wind farms.</p> <p>Include between eligible investments the wind farms.</p>
Results/Success	<p>The instrument is absolutely suited to develop renewable energy investments, because it is difficult that the banks finance these investments without additional guarantees, although it is almost guaranteed the return of the investment.</p>
Recommendations	<p>Include between eligible investments the wind farms.</p> <p>Limit own funds of enterprises applicants (in the case of existing enterprises);</p>
Contacts	<p>www.regione.basilicata.it</p>

Maribor	Wood district heating system Miren - (DOLB Miren):
Description of the best practice № 4	<p>The process of building DOLB Miren began in April 2010 with the adoption of the Ordinance on the concession for the local utility supply of steam and hot water in the Municipality of Miren-Kostanjevica. Company Top les energija was successfully applying on the public procurement for the concession performance of wood district heating system. Company is an example of a small local company that carry out investments and then through a contract supplies heat to customers. In the October 2011 municipality and company Top les energija signed a concession contract and company started with the designing of the district system and obtaining the necessary permits. Building permit has been granted in June 2012 after that the building of boiler and heating system started. Work was completed in November 2012. Trial operation lasted until the April 2013 when operating permit has been issued.</p> <p>Value of total investment amounted to € 678,210. The concessionaire successfully applies to the cohesion call DOLB 3 and gained 50 % of the grant in the amount of € 339,105. The second half of the amount was covered by concessionaire through bank credit.</p> <p>DOLB 3 is public tender within the framework of the Operational Programme of Environmental and Transport Infrastructure for co-financing district biomass heating for the period 2011 to 2015. Financial incentives are intended for investments in new systems and micro-systems of wooden biomass district heating. Incentives are also eligible for the investors expanding existing district heating system or building a new wooden biomass boiler as a source for an existing district system.</p> <p>The total amount of financial incentives in the form of grants for the implementation of each operation is determined in accordance with the rules for granting state aid, amounting to 30-50% percent of the eligible costs of the investment.</p>
Results/Success	<p>Under the project a new boiler room with storage for wood chip biomass was build and a district heating system with the heat substations. There were two new boiler installed, Froeling boiler Turbomat 500 kW and Turbomat 220 kW. There are public institutions (primary school, kindergarten, municipality building, etc.) and some private companies connected on the system. Their cost of heating is now lower than before the investment when they were heated by oil. For the investment the customers did not pay anything. In addition, the atmosphere is less affected by the emissions for all inhabitants of the</p>

	<p>municipality. In addition to the economic performance, investment brings other benefits too:</p> <ul style="list-style-type: none"> - Environmental impact (less CO₂ emissions, energy savings, environmentally friendly energy source) - Increased value of the property - Increased public awareness of RES and RUE - Improved energy balance of the local environment - Increased security and reliability of supply of thermal energy.
Recommendations	To have supportive environment for launching national calls in the field of RES with the aim to improve energy mix with the help of EU funds. Technical and financial documentation should be well prepared. Future energy use of final users should well predicted. For using EU fund the indicators should be used (kwh energy saved, CO ₂ emission saved.).
Contacts	Energy agency GOLEA, info@golea.si

Maribor	Energy performance contracting – example of good practice of renovation of the heating plant on heating oil and district heating system for the 580 units of the dwelling residential buildings
Description of the best practice № 5	<p>In the city of Maribor there are a few smaller district heating systems which were built in 70, when a lot of apartment buildings were also built. Some of them were already linked with the city public district system, remaining are in the property of apartments owners, which do not have financial sources for the renovation. This systems with the boiler rooms are mostly obsolete, oversized and ecologically unfriendly. The challenge is to find a suitable replacement mode not only from a technical point of view but also in terms of funding.</p> <p>The project of heating system renovation refers to the heating of 580 residential units in Pobrežje area, covering total 26.510 m² of heating living area. The first heating plant was built in 1974 and was based on mazut. That was later changed to the heating oil. During the period between 2010 and 2013 the owners of the apartments accomplished energy renovation by changing external doors and windows and additional thermal insulation of the façade. For this renovation owners spent their own financial resources. The renovation of the boiler room was done in partnership with company Energija plus according to the principle of energy performance contracting. In the beginning pellets were chosen as a new energy sources but after second opinion under which the air quality was taken into account (particularly in terms of particulate matter in the city) the natural gas was chosen as a new environmentally acceptable energy source in the cogeneration system.</p> <p>The investment carried out within three months cost 609.532,30 EUR excluding VAT. Investment included: renovation of the boiler room, cogeneration and heat substations. The majority of the financial sources was company own sources, part of the investment was covered by a national subsidy for savings in the area of RES. Offer of Energija Plus was not based on the classic energy contracting but was containing solution which corresponded to the specifics of the system on the one hand and wishes of the owners on the other hand. In addition to lower energy costs Energija Plus added in the contract</p>

	<p>model also planning, financing, management and operational control, servicing and maintenance for the period of 10 years. In this time owners of the apartments will repay the investment and after this period the system will take over the ownership and management. A tender and later a contract was prepared according to the needs assessment. Special attention was given to the reduction of energy costs.</p> <p>Aim to establish a modern, energy efficient and economically efficient district heating system has been achieved. Important parameters compared to baseline were significantly improved.</p>
Results/Success	<p>Users of the heating system got a modern heating plant and heating system which provides less harmful emissions in the local environment and significantly lower cost of heating. Fixed costs of heating system management together with the costs of financing the project remained the same as they were before the investment. Variable costs decreased by more than 30 % which was the primary objective of the project.</p> <p>Comparison of costs before and after renovation of the heating system: Before the renovation of the heating system heating costs for the selected apartment (60,33 m²) was for the January 144,65 EUR. After the renovation the cost for the same consumption would be 97,57 EUR – that means 47,08 EUR savings.</p> <p>Due to the installation of energy-efficient appliances at the annual level energy consumption is reduced by more than 1500 MWh. For the environment, where the boiler is located, it is also important to reduce the dust particles. This environment is a residential area that is already burdened with traffic nearby expressway.</p> <p>The investment is economically viable and has a return in line with investors' expectations. Investment will be reimbursed before the end of the contract period. In addition to the economic performance, investment brings other benefits too:</p> <ul style="list-style-type: none"> - Environmental impact (less CO₂ emissions, energy savings, environmentally friendly energy source) - Added value of cogeneration - Increased value of the property - Increased user-friendliness of the facility to the users or. owners - Increased public awareness of RES and RUE - Improved energy balance of the local environment - Improved financial indicators of investor - Increased security and reliability of supply of thermal energy.
Recommendations	<p>Very important is to have good cooperation with the owners of the apartment and with the managers of the apartment buildings. The agreement between the owner and the users should be very detailed to prevent misunderstandings and changes during the 10 or 15 years period. The payment for the energy services should be transparent and understandable to all users. It is very good that users ask as an associations or with the help of some institutions or energy agencies or some non-governmental bodies.</p>
Contacts	<p>Mr. Bojan Horvat, direstor of the company Energija plus, info@energijaplus.si</p>

Maribor	Thermal Power Plant Sostanj project with the EIB and EBRD loans support
Description of the best practice № 6	<p>- The 2007 project concerns the construction of a 600 MW super critical, lignite-fired steam turbine power plant and associated cooling tower, stack, flue gas desulphurization, wastewater treatment and control systems and connection to an existing substation.</p> <p>The power plant with an overall efficiency of 46 % will operate in cogeneration mode (supplying heat to the local district heating system) and will largely replace the existing lignite-fired generating capacity operating at low conversion efficiencies (26-33%). As a result, lignite consumption and CO₂ emissions will remain at current levels, but electricity production will increase by more than 30%. The project is designed to be carbon capture ready as there is ample space for the installation of CO₂ flue gas cleaning equipment in the future. The promoter has considered the possibility of long-term CO₂ storage.</p> <p>The selected technology for Unit 6 of the Šoštanj TPP is considered to be the best available technology (BAT) for lignite firing as a primary energy source in electricity production, and assures high-energy conversion efficiency and operation within the applicable regulations.</p> <p>The EIB is supporting the project with loans totaling EUR 550 million signed in 2007 and 2010 which are now fully disbursed. The total investment is estimated at 1.4 billion EUR, beside EIB the sources are provided by Holding of Slovenian power, Thermal power plant Šoštanj and loans from EBRD.</p> <p>The project meets the Bank's criteria for financing of new coal/lignite power stations. In particular:</p> <ul style="list-style-type: none"> • it employs state-of-the-art supercritical generating technology and is carbon capture ready (capable of future flue gas retrofitting with sufficient physical space in the vicinity of the power station to install the necessary equipment and compliant as per the competent authority with EU Directive 2009/31 on geological storage of carbon dioxide) • it increases the efficiency of electricity production by more than 20% in relation to the generating units replaced • the project contributes to meet growing electricity demand using domestic fuel resource (lignite) and contributes so to the diversification of energy resources in the region. <p>The benefits of the project are that it replaces existing and inefficient lignite generating capacity at the same site, contributes to security of supply (avoiding fuel price volatility), supports use of indigenous fuel resources in line with EU energy policy, contributes to a diversified generation mix in Slovenia and supports employment in a convergence region.</p> <p>EIB and coal power plants</p> <p>Under its current Energy lending Policy, which was approved by its Board of Governors in 2007 and is currently being reviewed, the Bank can finance coal/lignite power stations under very restrictive conditions, applying in particular the following “screening criteria”:</p>

	<p>New commercial coal/lignite power stations should use best available technology and be “carbon capture ready”. They should be cost effective, taking into account CO₂ externalities, i.e. be able to exploit CCS once that technology becomes commercially available. In order to avoid a shift towards carbon intensive electricity generation, new plants should replace existing coal/lignite power stations while providing a decrease of at least 20 per cent in the carbon intensity.</p> <p>Retrofitting projects for existing coal/lignite power stations should be relatively small investments, so that they do not delay plant replacement in the medium term, and they should aim at substantially reducing pollution, including by increased energy efficiency. Applying these criteria has resulted in at least 20 potential operations being found not eligible for Bank support, and the EIB lending to coal/lignite fired power projects represents some 6% of power generation projects supported by the Bank during the period 2007-2012.</p>																		
<p>Results/Success</p>	<table border="1" data-bbox="402 737 1511 1077"> <thead> <tr> <th colspan="2">Technical characteristics of Unit 6</th> </tr> </thead> <tbody> <tr> <td>1. Unit 6 net power</td> <td>545,5 MW</td> </tr> <tr> <td>2. Specific net consumption</td> <td>8.451 kJ/kWh</td> </tr> <tr> <td>3. Price of coal</td> <td>23,18 EUR/t (2,25 EUR/GJ)</td> </tr> <tr> <td>4. Hours of operation at full power</td> <td>6.500 h/year</td> </tr> <tr> <td>5. Number of employees</td> <td>200</td> </tr> <tr> <td>6. Service life</td> <td>40 years</td> </tr> <tr> <td>7. CO₂ emissions</td> <td>0,87 kg/kWh</td> </tr> <tr> <td>8. operating permit</td> <td>February 2016</td> </tr> </tbody> </table> <p>Expected results:</p> <ul style="list-style-type: none"> • to cut the cost price of electrical energy, • to reduce negative influences on the environment: <p>SO₂ from 400 to 100 mg/Nm, NO_x from 500 to 150 mg/Nm₃, CO₂ by 35% per MWh,- to reduce the amount of dust particles, lower the noise level</p> <p>Unit 6 will also enable us to extend the production of electrical energy, determined by the amount of coal in the Premogovnik Velenje mine, from 2025 to 2054 The successful application to the EIB. Without EIB loans this project could not be realized.</p>	Technical characteristics of Unit 6		1. Unit 6 net power	545,5 MW	2. Specific net consumption	8.451 kJ/kWh	3. Price of coal	23,18 EUR/t (2,25 EUR/GJ)	4. Hours of operation at full power	6.500 h/year	5. Number of employees	200	6. Service life	40 years	7. CO ₂ emissions	0,87 kg/kWh	8. operating permit	February 2016
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<p>Recommendations</p>	<p>Very good technical and financial analysis of the materials and energy flows should be done before applying for the loan. A lot of sustainable criteria should be met.</p>																		
<p>Contacts</p>	<p>Marko Jelen, Thermal Power Plant Sostanj, public relations, marko.jelen@te-sostanj.si</p>																		
<p>Fermo</p>	<p>Co-funding of energy audits and feasibility studies to EPC contracts (Energy Performance Contract):</p>																		
<p>Description of the best practice № 7</p>	<p>Within the DM 28 December, 2012 “Thermal energy bill” refund is part of the costs incurred for the implementation of energy audit of buildings in the event that following the diagnosis are carried out interventions which can then take advantage of the</p>																		

	<p>incentives provided by the above-financing scheme. This mechanism may in part contribute additional form with respect to the proposed instrument. Similarly, it is expected that for interventions that benefit from tax deductions is also possible to deduct the project expenses.</p> <p>Among other economic incentives to which you have access to preliminary energy audits to EPC contracts it is possible to cite the European funds ELENA Program and in the future the National Fund for Energy Efficiency provisions of the decree transposing Directive 2012/27/EU. Most of the energy efficiency measures and also many interventions introduction of RES in buildings require a challenging diagnosis phase that is able to identify the best opportunities to be put in the elaboration of an EPC contract with a public or private buyer.</p> <p>The need for an accurate assessment is often an obstacle in the absence of this, in fact, most of the times it is difficult to accurately analyze the opportunities actually offered by a particular investment or economic factors related to it. It is therefore considered that the co-financing of interventions diagnosis is the key to move important investments. The stakeholders involved in this exercise are: Owners of structures (for efficiency) or investors (in the case of production of energy from RES); professionals or E.S.Co. who are within the expertise to diagnose; companies operating in the execution of any works/accomplishments.</p> <p>About the times they are variable from facility to facility; it is believed however that we can identify the times for the realization of diagnosis approximately equal to: 8-10 weeks for non-productive structures and 15-20 weeks for production systems.</p> <p>Terms can go further if you need to conduct a campaign of measurements “in situ”.</p>
Results/Success	The result is signing of EPC as a result of energy audits funded through the program ELENA. Example is “ <i>Servizio Energia Plus</i> ” of the Province of Modena 2013-2020.
Recommendations	The technicians who carry the diagnosis must be qualified and independent experts. The energy audit must also ensure, within the limits declared and agreed with the client, the quantitative results shown in the final report, both in terms of cost and energy efficiency. It is therefore considered that in the case in which the investment is not made by the rapporteur of diagnosis (as is the case in which the proposer diagnosis is an ESCO) is still required to identify a form of insurance results.
Contacts	Fabrizio Ragazzi, fragazzi@aess-modena.it
Fermo	Mini bonds, finance bills, dedicated investment funds.
Description of the best practice № 8	<p>Structuring of investment funds and closed for qualified institutional The business of global arranger covers services ranging from research to evaluate the advisability of investing economic/financial and legal risk to the analysis, structuring the fund and fund raising activities.</p> <p>The business of global arranger for the formation / structuring of closed-end investment funds and alternative cannot be identified with the activity in a region or in a common.</p>
Results/Success	It is a very efficient instrument because it is based on in-depth analysis of profitability and risk. This feature makes it attractive investment for investors who have the goal of diversifying the portfolio and the compatibility of their risk appetite and risk / return profile of the portfolio.

Recommendations	<p>It is not available yet, given to geographical location far from main financial centers. Development activities in place that will require 8-11 months. Currently the costs are not quantifiable in advance.</p> <p>The instruments are in general efficient ones because in addition to solving the financial needs, they contribute to the cultural growth and to support medium and long-term planning.</p> <p>PSR regional funds were used to support and promote the introduction of RES in rural area in particular reference is made to measure 1.2.4 which was financed an anaerobic digestion powered by only animal waste.</p> <p>The instruments are interesting, and are appropriated and sufficient. The major problem is the bureaucracy and the dialogue between the various agencies and institutions, which often discouraged and frightened companies interested. We need greater cooperation and planning between the various bodies, agencies and institutions.</p>
Contacts	Deana Carosi, progettazione@cosif.it

Sofia	Specialized Municipal Privatization Fund (SMPF)
Description of the best practice № 9	<p>The fund manages part of the resources, which come from the privatization of municipal sites, on the basis of regulations approved by Sofia Municipal Council. It is a unique practice for the country and provides for the fast financial realization of innovative ideas and projects in different spheres of municipal activity.</p> <p>SMPF is an independent financial instrument which ensures the fast realization of innovative ideas and projects in the public sector – thus improving the quality of urban areas, municipal ecology, public services, etc.</p> <p>For the period 1995-2011 diverse municipal projects have been financed to the total value of 420 million leva. Funds absorption for the sake of financing innovation projects aimed at positive results is specific in each situation but the institutional foundations of the financing process are conservative, which guarantees stability.</p>
Results/Success	Clear evaluation criteria are set for evaluation of the project proposals. SMPF is not subject to long-lasting budget procedures. The public is highly informed and institutional support and political consensus for the fulfillment of the specific goals have been ensured.
Recommendations	As a former socialist state, Bulgarian public authorities dispose of relatively bigger stock of public property which could be transferred into private ownership in exchange for funds. This practice could be inapplicable in other countries, due to their specific historical and economic conditions.
Contacts	Katya Valkova, k.valkova@sofia.bg
Sofia	MGFSME instrument
Description of the best practice № 10	<p>MGFSME instrument provides individual guarantees to SMEs, which apply before the fund in order to realize specific business project. The guarantee of the fund allows partner banks to offer better crediting conditions to SMEs.</p> <p>MGFSME has been created with the mission of implementing the policies of Sofia Municipality related to supporting SMEs and stimulating entrepreneurship on its territory.</p>

Results/Success	<p>MGFSME manages to serve as easily accessible, rapid and cost-effective financial tool, which increases substantially SMEs' chances to receive funding from the Fund's partner banks. The fund balances the interests and the capabilities both of SMEs and partner banks – the SME receives better crediting conditions while the banks increase the number of their customers. The diversification of services and keeping abreast of the needs of the SMEs solidifies the fund's success - consultancy and information services have been gradually introduced, highly qualified experts and consultants have been engaged throughout the years, stable partnership networks have been established, framework agreements signed, etc.</p> <p>The economic crisis/rapid economic changes could occasionally strain the cooperation with bank institutions, while changes in legislation in the field of SMEs are inevitably linked with alterations in the fund's regulations and core documents (which takes additional time and resources).</p>
Recommendations	<p>The "Europe" program represents a progressive mechanism for cooperation between the local authorities and the civil sector. It supports the implementation of successful initiatives and good European practices in the capital.</p> <p>Through the selection and implementation of local projects, the Program strives to support and promote local policies in areas such as education, culture, social affairs, voluntarism, marginalize and integration of disadvantaged people.</p> <p>The implementation of the program helps the participant, usually newly-established NGOs, gather experience and self-confidence. On the other hand, the realized ideas and the outputs produced advocates the activities of the administration.</p> <p>Program priorities are decided by the Municipal Council, which means that all political parties are behind its implementation. They are predominantly focused on capacity building, empowerment and improvement of collaboration with the social sector.</p> <p>It doesn't have the chance to be an all-the-year-round thing - runs for 9 months only, due to budget approval procedures.</p>
Contacts	Katya Valkova, k.valkova@sofia.bg
Sofia	Municipal Bank AD in Sofia
Description of the best practice № 11	The bank provides direct financing of projects with RES and more specifically solar projects. The main beneficiaries are new legal entities, established explicitly to implement such project. The company starts its activity by buying land, getting needed licenses, concluding contracts for power purchase, etc. The process includes finding of bank – lender and direct financing of the project.
Results/Success	n/a
Recommendations	n/a
Contacts	Katya Valkova, k.valkova@sofia.bg
Sofia	National Trust EcoFund
Description of the best practice № 12	The <u>National Trust EcoFund</u> that was established in October, 1995 through the first Debt-for-Environment Agreement between the Government of the Swiss Confederation and the Government of the Republic of Bulgaria. According to article 66, paragraph 1 of the Environmental Protection Act the goal of the Fund is managing

	<p>funds provided under debt-for-nature and debt-for-environment swaps, funds generated from international trade with greenhouse-gas Assigned Amount Units (AAUs), from sale of aircraft greenhouse-gas emission quotas, as well as funds provided under other types of agreements with international, foreign or Bulgarian sources aimed at environmental protection in the Republic of Bulgaria. The Fund contributes to the implementation of the Bulgarian Government environmental policies and the enforcement of its international commitments in this field.</p>
Results/Success	<p>PRIORITY AREAS</p> <p>Clean up of past pollution:</p> <ul style="list-style-type: none"> • hazardous waste and hazardous substances disposal; • sources of drinking water or food contamination (by heavy metals, toxic organic compounds or other harmful chemicals); <p>Reduction of air pollution:</p> <ul style="list-style-type: none"> • pollutants of health concern: particulate matter, sulphur dioxide, nitrogen oxides, lead and other toxic chemicals in urban areas; • green-house gases: carbon dioxide, methane, CFCs. • Clean water protection: <ul style="list-style-type: none"> • municipal and industrial waste water treatment plants in the Danube watershed; • municipal and industrial waste water treatment plants in the Black sea watershed. • Protection of biodiversity: <ul style="list-style-type: none"> • development of infrastructure in protected areas for species protection and habitat preservation, and • bio diversity inventory and monitoring and sustainable utilization of components for creating social alternatives.
Recommendations	n/a
Contacts	Katya Valkova, k.valkova@sofia.bg
Sofia	Kozloduy International Decommissioning Support Fund (KIDSF)
Description of the best practice № 13	<p>November 1999, the Bulgarian Government and the European Commission signed a Memorandum of understanding in which the Bulgarian Government undertook a firm commitment to close and decommission Units 1 - 4 of the Kozloduy Nuclear Power Plant (NPP). The Kozloduy International Decommissioning Support Fund (KIDSF) has been established, administered by the European Bank for Reconstruction and Development (EBRD), in order to support the decommissioning activities and to mitigate the negative consequences of the units' early closure. Part of the purposes of the KIDSF is to assist in the necessary restructuring, upgrading and modernization of the energy production, transmission and distribution sectors as well as to improve energy efficiency. In 2004 the Bulgarian Government approved a strategy document</p>

	"Implementation of the Strategy in the Energy Sector for mitigating the negative economical, ecological and social consequences of the early closure of VVER-440 units of Kozloduy NPP in the non-nuclear sector". Several areas in the energy sector have been identified for KIDSF support.
Results/Success	A project selection procedure in the above mentioned sectors was started in late 2011 in order to use 120 million Euro grant support from the KIDSF. The first stage has been completed and the evaluated project proposals will be submitted for approval by Assembly of Contributors of the KIDSF. Project proposals can be submitted by the end of the second stage - end of August 2012 and financing will be provided only in case that there are funds available left from the first stage.
Recommendations	n/a
Contacts	Katya Valkova, k.valkova@sofia.bg

Thessaloniki	MGFSME instrument
Description of the best practice № 14	<p>A significant step was made for the enhancement of the Greek energy services market, as the registry for energy services companies (ESCO's) operating in Greece was finally launched at the website www.escoregistry.gr. The operation of energy services companies in Greece has been at first envisaged by Law 3855/2010 on "Measures to improve energy efficiency in end use, energy services and other provisions", implementing the Energy Services Directive (2006/32/EC), while Ministerial Decision on "ESCOs - Functioning, Registry, Code of conduct and related provisions" (D6/13280/7-6-2011), issued in execution thereof, regulated the particular conditions to be fulfilled by ESCO's and provided for the operation of the corresponding registry. The design and installation of energy efficient systems of energy production from RES is included in the context of energy services.</p> <p>The Directorate for Conservation and Efficient Use of Energy that belongs to the General Secretariat for Energy and Climate Change of the Ministry of Environment, Energy and Climate Change, is responsible for the registry of the Energy Service Companies. Until today 14 companies have been registered whereas over 100 applications have been submitted and over 200 companies have expressed interest. According to the Ministerial Decision, in the ESCO's enrolled in the registry are categorised as follows:</p> <p>Category A: companies Category B: individuals</p> <p>ESCO's of category A can be further categorized as follows:</p> <p>Subcategory A1: companies they have materialized or are materializing projects <u>through Energy Performance Contracts</u>, of total budget of at least 300.000 Euro in the last 5 years</p> <p>Subcategory A2: companies that have materialized or are materializing energy projects, of total budget of at least 1.000.000 Euro in the last 5 years</p> <p>Subcategory A3: the remaining companies</p> <p>The registration criteria are summarized as follows:</p>

	<ul style="list-style-type: none"> • Technical competence in studying and implementing energy projects (years of experience, human resources) • Number of energy projects (at least 3, one of which in the last three years) • In case of a company, energy services provision must be specifically mentioned between the objects of the company in its Memorandum of Association <p>The Ministry plans to change the ESCO's registration criteria because today the procedure for the submission of a company to the registry is still quite lenient. It must be noted that in the registry none of the 14 companies fall into the category B or subcategory A1, whereas 7 companies are listed in subcategory A2 and 7 in subcategory A3. The ESCO market in Greece is still on the starting ground. There are not successful examples of Energy Performance Contracts in Greece apart of only few attempts that have been made from some companies in order to play the role of an ESCO for the application of Third Party Financing schemes.</p>
Results/Success	<p>The ESCO market in Greece is still on the starting ground. Nevertheless, some lessons have been learned from IEE projects that dealt with implementing ESCO projects. The gained experience shows that the technical solutions applied in an ESCO project should be as simple as possible without, however, sacrificing the systems' reliability. The contract between the ESCO and the end-user has to be clear and simple but should cover possibly, all aspects concerning billing, end-user consumption along the future, insurance and risks management.</p>
Recommendations	<p>The main barriers to the implementation of Energy Performance Contracts are the following:</p> <ul style="list-style-type: none"> - Lack of standardised Measurement and Verification practices - Complex accounting/ book-keeping rules - Complicated procedures of public tenders in the public sector (need for separate tenders for the design and the construction phase of the project) - Political and financial uncertainty that lead to subsidy/policy uncertainty and unstable energy prices - The financial institutions are not familiar with the concept of ESCO projects, thus they provide conservative lending practices, resulting this way in the lack of commercially viable project financing. Also, FIs perceive energy projects (incorrectly) as inherently more risky than other investments. Consequently, specific financial schemes, and procedures have not been developed, due to the not yet active market - Standardisation of the Measurement and Verification process – Transposition of the Performance Protocol (USA Ministry of Energy) - Resolving legal issues (especially for public sector) – Book keeping rules for the public sector <p>The Centre for Renewable Energy Sources and Saving (National Energy Centre and Research and Technological Centre for RES/RUE/ES) has undertaken by the Greek Government (Ministry for Environment and Climate Change) a demonstration and pilot</p>

	<p>project for energy savings interventions to specific public buildings through the instrument of Energy Savings Performance Contracts. This project will help the government support the development of the ESCO market and pinpoint the technical, procedural and legal issues for the application of these ESPC's. Finally, it will serve as an example for other public buildings too.</p>
Contacts	Mr Kimon Ifantidis, YfantidisK@eka.ypeka.gr
Thessaloniki	JESSICA
Description of the best practice № 15	<p>In July 2010, a Funding Agreement between the Hellenic Republic and European Investment Bank (EIB) was signed, which established the JESSICA Holding Fund Greece as a separate block of Finance within EIB (Joint Ministerial Decision 35996/EYS 5362 as amended and in force today). Investment Board is the decision making body of JESSICA Holding Fund, following the recommendations of the EIB. The competent Managing Authority for JESSICA is the Special Coordination Unit of NSRF Operational Programs, Ministry for Development & Competitiveness. Five Regional Operational Programmes and one Sectoral Operational Programme (OP Environment and Sustainable Development) have contributed a total amount of 258 million Euros into the JESSICA Holding Fund.</p> <p>In March 2011, a call for expression of interest for the selection of Urban Development Funds was published, according to which five (5) financial intermediaries were selected, that constitute the core function of JESSICA's implementation in Greece. These financial intermediaries are:</p> <ul style="list-style-type: none"> - National Bank of Greece is the competent UDF for the regions of Attica, Western Greece, Ionian Islands, as well as for the contribution of OP "Environment and Sustainable Development" - Investment Bank of Greece is the competent UDF for the regions of Eastern Macedonia & Thrace, North Aegean, Western Macedonia and Epirus - EFG Eurobank is the competent UDF for the regions of Mainland Greece and Peloponnese - Piraeus Bank is the competent UDF for the regions of Central Macedonia and Thessaly - Pancretan Cooperative Bank is the competent UDF for the region of Crete. The main beneficiaries are public and private entities or public private partnership schemes aiming to implement urban projects that constitute part of an Integrated Plan for Sustainable Urban Development. Funding applications may be submitted to Urban Development Funds which have already published the calls for selection of urban projects. The projects should be revolving and are required to provide also social benefits to local communities. <p>Piraeus Bank, as the competent UDF for the regions of Central Macedonia and Thessaly, has published a call for selection of urban projects in May 2012 for the region of Central Macedonia.</p> <p>In its capacity as a Regional Development Fund, Piraeus Bank manages 40 million Euros of JESSICA funds for the financing of urban development projects in the regions of Central Macedonia and Thessaly. Moreover, Piraeus Bank co-finances the projects</p>

	<p>with €16.8 million of its own resources. A total of 12 projects with a total budget of €75.5 million which have been submitted for a financing amount of €36.7 million by JESSICA are currently being evaluated in Central Macedonia. The projects being evaluated involve, without being limited to, the power upgrade of road lighting systems, a solid waste management plant, electric and thermal power generation from biogas, a broadband wireless network providing access through WiFi hotspots, roofing structures and power upgrading of sports facilities etc.</p> <p>The first project finance agreement in Central Makedonia was signed in March 2014 in Thessaloniki between Piraeus Bank and VIOAERIO PELLAS S.A.as part of the JESSICA initiative. This is a project involving the construction and operation of a 0.95 MWe biogas electric and thermal power generation plant using biomass, which is to be installed in Krya Vrissi, Municipality of Pella, in the Pella Region.</p>
Results/Success	n/a
Recommendations	<p>Bad creditworthiness of local authorities</p> <p>Lack of projects' maturity</p> <p>Difficult to prove that the investment will yield a return</p> <p>Changes in the legal framework</p> <p>Promotion of financing instruments for projects' maturation (e.g. ELENA)</p>
Contacts	Mr Naoum Athanasiou, Piraeus Bank, AthanasiouN@piraeusbank.gr
Thessaloniki	Operational Programme of Environment and Sustainable Development, for the period 2007-2013
Description of the best practice № 16	<p>The Operational Programme of Environment and Sustainable Development, for the period 2007-2013, is financing projects in the base of an integrated strategy aiming at overcoming the climate change. The main development aspiration of the programme concerns the protection of the environment, the rational management of natural resources and overcoming the problems created by global climate change as well as the adaptation of a new development model. The programme has 11 Priority Axes. The first 5 axes are cofinanced by the Cohesion Fund, whereas the next 6 are cofinanced by the European Regional Development Fund (ERDF).</p> <p>According to the 3rd amendment of the programme, the total public expenditure is over 2 billion Euros (European cofinancing 1.720.000 Euros).</p> <p>A major priority in order to protect the environment and to address the climate change, is energy saving and RES exploitation. Relevant projects are financed through Axis 1 “Protecting the atmospheric environment and urban transportation – managing Climate Change – Renewable Energy Sources” (Funding from Cohesion Fund) and Axis 6 “Protecting the atmospheric environment – Managing Climate Change” (Funding from ERDF). More specifically, in the context of Priority Axis 1, the main interventions are:</p> <ul style="list-style-type: none"> - State aid in the context of the Development Law 3299/2004 for investment plans of businesses active in the area of RES. In this context 252 projects have been approved with a budget of over 448 million Euros - Energy Conservation and RES projects in public building and schools

	<ul style="list-style-type: none"> - CHP projects in hospitals - etc <p>In the context of Priority Axis 6, the initiative “EXOIKONOMO KAT’OIKON” (Energy Conservation in houses) is financed with 15 million Euros, and also 10 million Euros are allocated to the JESSICA Fund. “EXOIKONOMO KAT’OIKON” is an initiative related to energy efficiency measures in private households. The main objective of the initiative are to reduce energy consumption of buildings (for housing purpose) and to reduce CO2.</p> <p>The main beneficiaries of the programme include: Ministries, General Secretariats of Regions, Legal Entities of Public Law, Monasteries in Mount Athos, Local Administration Organisations of the 1st and 2nd Degree, Local Administration’s Agencies.</p> <p>In the context of Priority Axis 1, 383 projects are financed with a budget of over 720 million Euros whereas in the context of Priority Axis 6, 11 projects were financed with a budget of over 44 million Euros (Data: 24/9/2013).</p> <p>In the region of Kentriki Makedonia, in the context of Priority Axis 1, and more specifically in the category of public buildings retrofitting and RES systems 62 projects are approved for co-financing with a total budget of about 56 million Euros.</p> <p>In the region of Kentriki Makedonia, in the context of Priority Axis 6, 53 projects have been approved for state aid in the context of the Development Law 3299/2004 for investment plans of businesses active in the area of RES with a budget of over 14 million Euros.</p> <p>The duration of the programme is until 31-12-2015.</p>
Results/Success	<p>The program is considered successful since the target of 150 RES projects has already been reached (359 are financed whereas 195 projects has been successfully implemented). Also the target of reducing the greenhouse gases by 300 Kt CO2 equivalent is estimated that it will be reached when the implementation of the already contracted financed projects is completed.</p> <p>The projects financed by the program are very important not only due to their installed RES capacity but also of the innovations they introduce, their contribution to regional development and their demonstration capacity.</p>
Recommendations	n/a
Contacts	Mr Sotirios Maravelis, s.maravelis@mou.gr
Thessaloniki	Law 3908/2011
Description of the best practice № 17	<p>Law 3908/2011 (known as Investment Law) in its new form, and after the enactment of the Law 4146/2013 provides three different subsidy types: 1) income tax relief, 2) subsidized expenditures and 3) leasing subsidy (Art. 4, Law 3908/2011) or a mixture by choice of the investor. The part of investment plans subject to the provisions of the Law with respect to the amount covered by a bank loan may be funded by soft loans from credit institutions which cooperate with the National Fund for Entrepreneurship and Development (ETEAN)</p>

It is not clearly stated that RES related projects should be supported but support may be provided under the provisions of art. 6 of the law (General Investment Plans). In general, all Renewable Energy Sources' technologies (wind energy, solar energy-CSP, geothermal energy, biogas, hydro-power, biomass) are eligible for funding except for electricity generation from photovoltaics. Investment plans in the RES sector, which do not belong to the hydroelectric and hybrid power plants, the pumped energy storage reservoirs, and the energy production units from biomass and biogas, which will be submitted after the 1st of January 2014, may only claim tax relief.

The main beneficiaries are all enterprises based in Greece as long as they are 1) private enterprises, 2) commercial enterprises or 3) cooperatives (art. 8, par. 5 Law 3908/2011). It must be noted that the aid scheme does not apply to investment plans of public corporations and organizations or their subsidiaries.

The aid intensity ranges from 15% to 60%, depending on the size of the applying company, the type and location of the investment. The Greek Territory has been divided into three geographical zones, which mainly diversify the amount of the grant. For example, for Thessaloniki that falls into zone B, the maximum subsidy level is up to 30% for large enterprises, up to 35% for medium enterprises and up to 40% for small enterprises.

Investors must bear at least 25% of the total investment costs (art. 8 par. 6 Law No. 3908/2011)

Art. 6 of the Law, distinguishes between three types of general investment plans: General Entrepreneurship (all investment plans which qualify for aid under the provisions of the present law, but which do not come under any other category), Technological Development (company research modernization projects, by using technological and organizational innovation procedures) and Regional Convergence plans (Investment plans for productive activities which make use of local competitive advantages, address local needs and regional problems with environmentally-viable technological applications, introduce energy-saving and water resource-based technologies and promote environmentally-friendly restructuring and development of regions of economic activity). Investment plans on RES-related projects fall in the category of General Entrepreneurship or Regional Convergence plans.

A minimum investment has been set for general investment plans:

- Large enterprises: € 1,000,000
- Medium-sized enterprises € 500,000
- Small Enterprises € 200,000

Investment plans for which regional aid is granted in accordance with the provisions of the present law must relate to the creation of a new unit or the extension of an existing unit or diversification of production in a unit to new, additional products or a fundamental change to the overall production process of an existing unit.

Application for aid for investment plans under the present Law must be submitted in April and October, with the exception of large investment plans, which may be submitted at any time. The evaluation is done twice a year from May until November.

The applications of investment plan, are evaluated and graded on the basis of certain criteria. RES and energy conversation technologies are given a bonus.

	<p>The main competent authority is the General Secretary of Strategic and Private Investments/ General Directorate of Private Investments/ Ministry of Development and Competitiveness (art. 11 par. 1a Law No. 3908/2011). Nevertheless, the Ministry of Macedonia-Thrace (Business Development Unit) is responsible for investment plans for Eastern, Central and Western Macedonia and the Region of Thrace (investment plans that come under the categories of Technological Development, General Entrepreneurship and Regional Convergence and have a budget of more than € 3,000,000) (art. 11 par. 1b Law No. 3908/2011). The Regional Directorates of Development Planning are responsible for all other investment plans (art. 11 par. 1c Law No. 3908/2011).</p> <p>The Ministry of Development, Competitiveness, Infrastructure, Transport and Networks is responsible for providing the funds for the subsidy scheme by including them in the Program of Public Investment every year (art. 12 par. 5 Law No. 3908/2011). The objective of the Investment Incentives Law (3908/2011) is to promote economic growth in Greece by introducing investment aid schemes to improve entrepreneurship, technological development, the competitiveness of enterprises and regional cohesion and promote green economy, the efficient function of existing infrastructures and the deployment of the country's human resources.</p> <p>The law contains a defined annual budget making clear the allocation of financial resources so investors may plan accordingly.</p> <p>In the Region of Kentriki Makedonia, the second semester of 2013, 33 business plans of a total budget of 112 million Euros were submitted whereas 195 business plans of a total budget of 358 million Euros were submitted in the first 2 months of 2014.</p> <p>Regarding investments in RES, the applications filled are hydroelectric power plants and energy production units from biomass and biogas, since investments in all other RES forms may only claim tax relief.</p>
Results/Success	n/a
Recommendations	n/a
Contacts	Papageorgiou Konstantinos, kon.papageorgiou@pkm.gov.gr
Zagreb	Western Balkans Investment Framework grant to develop the overall program of planned investments, and to undertake the feasibility study with environmental social impact assessment and cost-benefit analysis for the project “Zagreb on the river Sava”
Description of the best practice № 18	<p>In year 2013, on the proposal of the Ministry of Economy, the Croatian Government adopted a Conclusion on defining the Program for protection, development and utilization of the Sava River and the hinterland from the Slovenian border to Sisak. Accepting the conclusion enabled the coordination of development programs in Zagreb on the Sava River through the participation of all institutional stakeholders.</p> <p>The concept design developed for the “Zagreb on the river Sava” project provides a complete solution for protection, development and utilization of Sava river from Slovenian border to the town of Sisak. Project “Regulation and Development of the Sava river in Zagreb” applied to the Western Balkans Investment Framework, and a grant was requested to develop the overall programme of planned investments, and to</p>

	<p>undertake the FS with ESIA and CBA aspects included both for the project as a whole, as well as for individual sub-projects. Studies are currently being prepared by an international consortium MottMacdonald - WYG – Atkins, which was chosen by the Western Balkans Investment Framework. The total value of the study is two million euros, and altogether 1.5 million euros were approved as technical assistance for a feasibility study and strategic environmental impact assessment. HEP Development of multi-purpose real estate projects Ltd., which was in year 2014 renamed to Program Sava d.o.o., is the user of WBIF grant.</p> <p>Estimated total investment: 1,210m€ Estimated co-financing from EBRD: 300m€</p> <p>The stakeholders of the program “Zagreb on the river Sava”:</p> <ul style="list-style-type: none"> - Ministry of Finance - Ministry of Regional Development and EU Funds - Ministry of Foreign and European Affairs - Ministry of Construction and Physical Planning - Ministry of Environment and Nature Protection - Ministry of the Sea, Transport and Infrastructure - Ministry of Agriculture - Center for Monitoring Business Activities in the Energy Sector and Investments (CEI) - City of Zagreb - Zagreb County - Sisak-Moslavina County - Croatian Waters - HEP Group <p>WBIF is an instrument established by the European Commission and international financial institutions, including the EBRD and the EIB, with the fundamental task of identifying and assisting in the preparation of projects with prospects of future funding. WBIF grant is being used to develop the overall programme of planned investments, and to undertake the feasibility study with environmental social impact assessment and cost-benefit analysis for the project “Zagreb on the river Sava”.</p>
Results/Success	<p>FS, ESIA and CBA are currently being prepared by the consortium MottMacdonald - WYG – Atkins. The energy part of the project includes electricity production with a total installed capacity of 150 MW in hydro power plants. The total annual production amounts to 25% of the required capacity for the city of Zagreb.</p>
Recommendations	n/a
Contacts	Bruna Jakšić, bruna.jaksic@zagreb.hr
Zagreb	Subsidizing the purchase of electric and hybrid vehicles
Description of the best practice № 19	<p>Environmental protection and energy efficiency Fund, in collaboration with the Ministry of Environmental and Nature Protection announced two public calls for subsidizing the purchase of electric and hybrid vehicles. Fund provides up to 40% of</p>

	<p>the vehicle price. Amount of up to 70,000 HRK (9245 €) will be granted when purchasing electric vehicles, up to 50,000 (6600 €) when purchasing hybrid "plug in" vehicles and for hybrid vehicles emitting 100 g CO₂ g / km, up to 30,000 HRK (3900 €) can be obtained. In case of citizens, maximum amount which can be obtained is 70 000 kn, and in case of companies and businesses, this amount is 350 000 HRK. In 2014, Fund has provided 8 million HRK for citizens and 6 million for companies and businesses. Citizens, as well as, companies and businesses have shown great interest for Environmental protection and energy efficiency Fund subsidies when purchasing electric and hybrid vehicles. Due to that interest, the initial amount of 7 million HRK, assured for subsidizing, rose to 14 million HRK.</p>
Results/Success	<p>This kind of grant was awarded for the first time this year. Altogether 150 applications were submitted by citizens and 45 by businesses or enterprises. The procedure for obtaining funds is simple and fast. The first step is to choose a vehicle and submit a request for co-financing the purchase to the Fund. The application consists of the application form, copies of identity cards and offers for the vehicle, certified by the seller. Also, it is necessary to attach a brochure, flyer or a certificate from which the characteristics of the vehicle are clearly visible. Companies and businesses are required to submit a verified statement regarding the state aid received during the previous two years, as well as during the current fiscal year, a statement that the company is not experiencing financial difficulties, as well as confirmation of the Tax Administration on the settlement of obligations of public levies. Upon approval of grants, users sign a contract with the Fund on co-financing and have a six months term to realize the purchase. The co-financed amount is paid to the customer's account within 30 days after receiving the documentation necessary for payment.</p> <p>Considering the fact that this grant was awarded for the first time this year, it is not possible to list factors which affect sustaining the practice over time.</p>
Recommendations	n/a
Contacts	Bruna Jakšić, bruna.jaksic@zagreb.hr
Zagreb	Subsidizing the cost of purchasing and installing renewable energy systems in the City of Zagreb
Description of the best practice № 20	<p>Subsidizing the cost of purchasing and installing renewable energy sources:</p> <ul style="list-style-type: none"> • solar collector system • photovoltaic system • pellet boilers • pyrolysis wood boilers • wind turbines and batteries (standalone systems / off-grid) • energy class A heat pumps (according to Eurovent Energy Efficiency Classification): air-water (COP ≥ 3.2, EER ≥ 3.1), water-water and ground-water (≥ 4.45 COP, EER ≥ 5.05). <p>Subsidies users may be natural persons with residence in the City of Zagreb and legal persons having their headquarters in Zagreb. Funding the cost of equipment and installation of renewable energy systems will be subsidized up to 50% of the investment value or a maximum amount of 15,000.00 kuna.</p>

	Subsidizing the cost of purchasing and installing renewable energy systems for natural persons, as well as for businesses and enterprises, who are living or having their headquarters in the Zagreb directly contributes to fulfilment of 20-20-20 energy goals.
Results/Success	In year 2012 there were 99 applications of which 72 fulfilled the conditions of the contest, and 52 applicants have utilized the resources available for installing renewable energy systems. In year 2013, 60 individuals and legal entities applied for subsidies.
Recommendations	n/a
Contacts	Bruna Jakšić, bruna.jaksic@zagreb.hr
Zagreb	Subsidies for obtaining energy certificates, energy audits, and project documentation and performing energy reconstruction of apartment buildings -
Description of the best practice № 21	<p><u>Energy audits and Energy Certificates</u> In case of obtaining Energy audits and Energy certificates the Fund co-finances up to 40% of eligible costs, in order to identify possibilities to reduce energy consumption and determine the feasibility and cost-effectiveness of energy efficiency measures. Maximum amount which can be obtained by one building manager is 200,000 HRK, and total available is 1.5 million HRK.</p> <p><u>Project documentation</u> In case of obtaining Project documentation for energy reconstruction of apartment buildings it is possible to realize an incentive amounting up to 100% of eligible costs. The maximum amount which can be obtained for a building is 35,000 HRK, and in the case of connected apartment buildings, which constitute unique architectural and energy units, the maximum amount raises up to 200,000 HRK. Total available is 3.5 million HRK. When preparing project documentation it is crucial to include measures, consistent with the technical requirements which must be met by the major reconstruction project, intended to increase energy efficiency, as well as to show that the planned measures will result with at least 30% reduction in.</p> <p><u>Energy reconstruction of apartment buildings</u> In case of performing an energy reconstruction of an apartment building, it is possible to get subsidies amounting up to 40% of the total eligible costs of the investment. Total available is 15 million HRK, and it is possible to get up to 1.4 million HRK per building. Eligible costs are:</p> <ul style="list-style-type: none"> • Facade System - thermal insulation, mesh, plasters, color • Roof covering - roof tile, shingle, flat roof, green roof • Waterproofing • Lining the walls - gypsum plaster boards, wood, plaster • Screed • Boilers (condensation, wood chip / pellet and pyrolysis) • Heat pumps energy class A according to Eurovent Energy Efficiency • Solar thermal collectors • Construction / Reconstruction of chimney • Indoor lighting of common areas. <p>The Environmental protection and energy efficiency fund subsidizes obtaining energy audits, certificates, and project documentation for energy reconstructions, as well as</p>

	<p>performing the energy reconstruction of apartment buildings, as a part of a national Programme for the improvement of energy efficiency of apartment buildings for the period 2014-2020. Benefits of implementing the Programme are:</p> <ul style="list-style-type: none"> • Reducing energy expenditure by 116 million HRK per year • Reducing CO2 emissions by approximately 72,000 tons per year • Ensuring work places for 3000 people a year • Increasing the value of the property (lower utility bills, better thermal comfort, lower penetration of outside noise, lower maintenance costs) • Reducing consumption of fossil fuels and electricity for heating purposes • Encouraging the domestic industry of thermal insulation materials • Encouraging Biomass - increased employment in forestry and the development of supporting industrial production of wood pellets and briquettes • Savings of about 270 GWh of energy in the final energy consumption • Achieving 14.8% of the national target set for the year 2016
Results/Success	n/a
Recommendations	n/a
Contacts	Bruna Jakšić, bruna.jaksic@zagreb.hr
Zagreb	ESCO project - public lighting modernization
Description of the best practice № 22	The City of Zagreb and HEP-ESCO began the pilot project “Energy Efficiency in Public Lighting” in May, 2006, and completed it in August, 2006. The total value of phase one of the project was 3.5 million HRK. The modernization comprised two transportation routes, Avenija Dubrovnik and "Zeleni val". Old lamps were replaced with new ones with lower power requirements and better technical characteristics.
Results/Success	The implementation of the lighting modernization project has yielded many benefits for the City of Zagreb. Lower energy costs, reduced load on the infrastructure due to reduced installed capacity and lower maintenance costs make it possible for the city to save as much as 590 thousand HRK a year. Electricity consumption is reduced by 1.007.000 kWh annually, which causes the annual reduction of emission by 534 tons. A significant reduction in light pollution has been achieved as a result as well.
Recommendations	n/a
Contacts	Bruna Jakšić, bruna.jaksic@zagreb.hr
Zagreb	The system (i.e. city government) must guarantee the purchase price of electricity for an extended period of any renewable energy sources in order to ensure sustainability of the project for all users.
Description of the best practice № 23	Laws and implementing regulations explicitly express a positive attitude the Republic of Croatia towards renewable energy sources. Unfortunately, it remains only a letter in the wind. Finally, strategic documents of the energy and environmental protection sector of the Republic of Croatia had only declarative support for using of renewable energy sources including solar energy.
Results/Success	Based of the Contract for the purchase of electricity, the fee for renewable energy sources pay by all citizens, which would guarantee the safety of finance renewable energy sources.

Recommendations	The most common barriers were same as well as today - They are in administration. If you want to start doing something, destructive minority is imposed as a legitimate and introduces most of the citizens lots of various restrictions and quotas, like in the case of electricity production from photovoltaic systems, which introduced many restrictions, quotas, markers, surveys, receipts, certificates, statements of public notary expenses which significantly increases the cost of the project which make it unrewarding. There must be a clear model of renewable energy policy at local, regional and national level. The problem is that the Croatian annually changing legislation, and does not stimulate enough citizens to save energy and protect the environment. We have been speaking for five past years about urgent law-making of the Law on renewable energy sources but it hasn't passed yet.
Contacts	Prof. dr.sc. Ljubomir Majdandzic, dipl.ing.: ljubomir.majdandzic@etfos.hr
Zagreb	Development agency Zagreb is partner on project ECOFUNDING. The main objective of the project is to create a comprehensive platform of financial resources that links investors and entrepreneurs and include all financial engineering mechanisms in the EU with innovative solutions to financing concerning venture capital, private investment and the creation of public private cooperation structures.
Description of the best practice № 24	<p>The project is implemented by a strong, effective and specialized partnership - 11 partners representing 8 countries of the MED area - coordinated by the Council of Chamber of Commerce of the Valencia Region.</p> <p>Main beneficiaries are: SME, start- up.</p> <p>ECOFUNDING focuses its efforts on three main activity sections:</p> <ol style="list-style-type: none"> 1. Defining transnational platform of innovative services of green funding: defining catalogue of financial services and product, making online platform through which SMEs are going to increase their efficiency in approach to financial resources. Online Platform includes innovative ICT instruments like Service to Analyze the Rating, Self-Diagnosis and advising by RSS systems 2. Pilot actions- implementation of innovative services for SMEs: ECOFUNDING LAB consulting service that provides information and technical assistance to SMEs on funding access to reduce the gap between investors and entrepreneurs as well as to define collaborative protocols with regional financial institutions 3. Looking for green funding on global market: opportunity for financing energy efficiency and eco innovative projects: networking with EEN and Energy Agencies, organizing SMEs panel, B2B events between companies, funding actors and private investors. For the 10 companies involved in the project will be developed business plans. For three of them will be made investment plans and they will have an opportunity to sign an agreement with key actors in the financial sector that will examine and finance the best specific investment project <p>Project ECOFUNDING is co- financing through MED Program. Project budget is 1.478.143,56 Eur Budget for Croatia is 139.800,00 Eur. Duration of project: 02.01.2013.- 31.12.2014</p>
Results/Success	During the project green companies will have an opportunity to present themselves on online platform. In that way they will increase their efficiency to approach financing for

	energy efficient and eco innovative projects. Also, on platform companies can through innovative financial tool check their financial condition (banking computer system to assess the financial condition of the company online, through a set of 45 questions). Through the Service to Analyze the Rating companies can get the official position of the possibilities of obtaining financing from financial institutions or private investors. Using a system for consulting companies, according to their interests, they can keep track of categorized news via RSS systems. ECOLAB, consulting services, will offer to SMEs information and technical assistance in connection with the investors. The project counts on experts in the energy sector and green business who will help companies to develop their business (for 10 companies) and investment plans (for three companies)
Recommendations	During the project we made a lot of researches about Innovative financial instruments. We concluded there is a lack of those instruments. Much more financial instruments for SMEs with focus on the "green sector": Green entrepreneurs are much more open to innovation and product to add value development but they are often faced with the limitations of the market and only partially succeed to capitalize on its market potential.
Contacts	Lidija Zadro, lidija.zadro@raza.hr
Zagreb	We applied the published tender and successfully realized the Central Finance and Contracting Agency to grant aid for the purchase of the machine (purchase of equipment). The contest was intended for the development of SMEs in the various branches of manufacturing industry, IT, innovation, renewable energy, projects, etc.
Description of the best practice № 25	Grants for the promotion of RES and EE was in our case an intention for the purchase of a machine for the production of chaff. They could apply sign projects and acceptable was funded 85% of the project, ie to 200,000.00 kn. In our case, we received an amount of 66.000.00 kn and the price of the machine was 92.00,00 kn, which accounted for 58% of the price ... and what is important to emphasize, granted us a "moratorium" or an exemption from the implementation of the public procurement procedure, means, we were able to obtain directly from trusted manufacturers with whom we have had a very positive experience and confidence in the quality of the product. Otherwise, grant aid is very difficult to achieve, however, given in Economic climate in Croatia, they are an important source of financing for SME. Moreover, I believe that public procurement procedures do not support the "green" procurement. City of Zagreb as a local government could do a lot in this area (plants, buildings, energy regeneration).
Results/Success	Grants are very difficult to realize, but in order to bad economic climate in Croatia, they are an important source of financing for SMEs and contribute to the successful implementation of projects. The relationship between costs and benefits of the implementation of this instrument is positive. A lot of the administration and obstacles, prevails benefits after implementation.
Recommendations	The main obstacles are: the complexity of the process, lack of knowledge, lack of expertise, financial and administrative () literacy, lack of personnel, lack of understanding, fear, dealers have a small staff capacity and difficult to enter into the process of purchasing large equipment because it is not financially possible to handle.

	<p>For applying for EU funds for SMEs means the need to involve consultants, which is financially impossible for SMEs.</p> <p>I said is that it requires an individual approach to every entrepreneur. Every business has its own specifics which are often difficult to fit into rather dry bureaucratic tailored tenders. Furthermore, it is necessary to reduce the paperwork, increase the non-refundable portion, simplify procedures, conduct individual contacts with entrepreneurs (providing help determine specific requirements and needs). As an important thing, I would suggest that the payment for purchase made directly to suppliers what will impact at simplify and speed of all procedures.</p>
Contacts	ADMIR SARUNOVIC , www.selidin.hr
Bucharest	PARC FOTOVOLTAIC 0,7MW MOARA VLASIEI
Description of the best practice № 26	- The project PARC FOTOVOLTAIC 0,7MW MOARA VLASIEI spanned a period of 18 months and was divided into two stages: the permits and the actual construction. The installation and building erected lasted a month and a half, the remaining time being devoted to paperwork related documents and approvals. The cost was around 900,000 euro amount. The financing scheme was completed from three sources: equity, bank loans and supplier credit granted by the manufacturer of the park. The installed power is 654 kW / h.
Results/Success	Romania's green energy target for 2020 is 24% out of the total consumption. This target was already reached at the end of 2013, all projects of this kind contributing with each installed capacity.
Recommendations	N/A
Contacts	Alexandru.tudorica@sabgroup.ro

As a whole the project partners propose 26 practices of innovative financial instruments.

The grants and subsidies are widely used by all partners, as well as the bank loans and specialized funds. The countries support also the EE measures and RES through their national legislation and regional and local funds. The EU financial sources like the Operational Programs, JESSICA and ELENA initiatives are also known and utilized (GP7, GP13, GP15, GP16, GP18, GP25).

The innovative approach is the way different partners integrate the financial instruments to achieve better results and efficiency of the projects' implementation. Energy performance contracting applications are cited from Slovenia (GP5) and Italy (GP7). The EPC (GP5) in Maribor has generated the finance by own sources and national subsidies; the EPC in Fermo (GP7) utilizes from ELENA initiative. In Maribor the concession in GP4 is financed by grant and credit. For the realization of the project in Romania (GP26) a combination of equity, loan and supplier credit is used.

ESCOs are considered innovative financial instruments in Greece (GP14) and in Croatia (GP22). The white certificates and thermal bills are widely applied in Italy. There are some examples for mini bonds (GP8) and venture capital developments (GP24).

There is a variety of innovative financial instruments in the project partner countries that support the energy saving programs and pilot project implementation. They still need to be further developed and bottlenecks for their broader application have to be overcome.

5.2 Public Procurement Practices

Potenza	
Description of the best practice № 27	<p>For the realization of some plants in the RES, the Province of Potenza, as a beneficiary, taking part in special institutional partnership whose partners are represented by local authorities (Municipalities and former Mountain Communities) and Local Health belonging to the territorial reference. The Administration Lead was detected in COMMUNITY MONTANA, while the Responsible Party is the legal representative of the same COMMUNITY MONTANA. The partnership has considered institutional cooperation as an element of interest in the policy development of the network of services to people, in fact, territorial cooperation has become one of the three goals in the 2007-2013 Structural Funds programming.</p> <p>Province of Potenza is part 4 of institutional partnerships for the realization of projects on RES, funded under the program PO FSR 2007-2013.</p> <p>The main objective of the partnership is the operation of the City for the implementation of the interventions and the management of European funds.</p> <p>Institutional partnerships have been established in about 2009, and their duration is equal to that of the operational program above. The purpose of these partnerships are pursued by assuming as a working tool of the conference facilities provided for by art. 14 of Law 241/90, which brings together representatives of the individual components of the same local government partnerships. The costs involved are variable; they are determined, for each entity associated with that Administration Responsible annually, indicates the statement of revenue and expenditure of the service provided by the City.</p>
Results/Success	The instrument of partnership appears to be effective in view of an effective collaboration between governments on joint development projects in their belonging territories
Recommendations	Exemplification of local legislation for the realization of RES
Contacts	Luigi D'Angelo ufficioenergia@comune.potenza.it
Potenza	Liberalization of the gas natural market “gara d’ambito”
Description of the best practice № 28	The promotion of investments of the local gas distributors depend on the maximum score within the evaluation grid of the bids and on the operational procedures, which are established by the AEEG (National Energy Authority).
Results/Success	
Recommendations	The effectiveness of the instrument will depend on the sensitivity and attention that it will be paid during the drafting of the invitation to tender. Difficulties in integrating the solutions proposed within the project executive.

Contacts	Ing. Anna Claps anna.claps@comune.potenza.it
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Maribor	Introducing CNG in the public transport of Ljubljana
Description of the best practice № 29	<p>Public company Ljubljana Passenger Transport was a partner of the CIVITAS ELAN project (between 2008 and 2012), co-funded by the European Commission. The CIVITAS Initiative (an acronym derived from the city- VITALity - Sustainability) is an initiative of the European Commission, which has been running since 2002 and is financing from research framework programs. It is intended for demonstration projects in cities, coordinated by the Directorate-General for Energy and Transport. Its aim is to test innovative strategies in urban traffic, which contribute to the realization of European policies in the field of transport, energy efficiency and alternative energy sources in transport and environmental protection. Demonstration projects combining the use of transport policy and technology. The purpose of the project CIVITAS ELAN was to develop sustainable mobility in five European cities (Ljubljana, Zagreb, Brno, Ghent, Porto). Much attention was devoted to the development of user-friendly, simple, quick and safe public transport, cycling, walking, use of alternative energy sources and access to services.</p> <p>Within the EU Civitas Elan project there were 20 new CNG buses co-financed for the urban public transport of Ljubljana. The value of purchase was 5 million euros. The purchase was made under public procurement led by Public Holding Ljubljana. Compared to the old diesel buses the new CNG buses reduce the harmful effects of emissions on the environment by 80 %.</p> <p>Bus brand name: IRISBUS IVECO Vehicle type: single bus, low floor. Vehicles meet the Euro 5 standard.</p> <p>In 2011 there was also CNG charging station build at the site of LPP - Public company Ljubljana Passenger Transport. The station is intended to supply buses and service vehicles of public companies Ljubljana, as well as for public use. In 2008 Ljubljana, together with four other European cities, successfully applied to call under CIVITAS Plus Initiative. One of the Ljubljana's project activity/investment was purchased of 20 new CNG buses. Without EU funding, this investment would not be possible.</p>
Results/Success	<p>With buses running on natural gas, city of Ljubljana will continue to improve the quality of urban life, maintaining a better and healthier environment, cleaner air and reducing noise levels. 20 state of the art technology equipped buses reduced the harmful effects of emissions on the environment for 80%.</p> <p>Based on good environmental outcomes Municipality of Ljubljana intends to buy 10 more CNG buses in 2015. Successful applying to the Civitas initiative.</p> <p>Successful management and implementation of the project activities.</p> <p>Improved public transport service Increased use of public transport Increased public awareness of RES and RUE</p>

	Less CO2 and particulate matter emissions
Recommendations	The city should have developed a sustainable mobility strategy and have a good international relationships. It is good if the city is the owner of the bus service provider or to have somehow long term service provide agreement. The CNG filling station infrastructure should be available. The applying for funds for buses and for filling station should be very well coordinated to have them both at the same time available. Stike roles about the air pollution standards should be taken into account.
Contacts	David Polutnik , david.polutnik@ljubljana.si

Fermo	Third-party Financing for Co-funding of Energy Efficiency Projects
Description of the best practice № 30	<p>The European legislation on public procurement based on the theme of energy efficiency includes the following directives: -Directive 2006/32/EC on end-use efficiency and energy services and repealing Council Directive 93/76/EC recently replaced by Directive 012/27/EU Energy Efficiency; -Directives on public procurement (2004/18/EC e 2004/17/EC) -Directive 2010/30/EU on labeling and standard product information on the consumption of energy and other resources in products derived by energy -Directive 2010/31/EU on energy efficiency in buildings -Directive 2009/125/EC establishing a framework to define the principles of eco design energy products -Directive 2009/33/EC on the promotion of clean and efficient transport - Regulation (EC) No. 1222/2009 on the labeling of tires with regard to power efficiency and other essential parameters (Updated with the regulations 2011/228/EC, 2011/1235/EC) -Regulation (EC) No 106/2008 of the European Parliament and of the Council of 15 January 2008 on Community labeling program for office equipment (Energy Star) (updated with the Regulations 2009/789/EC, 2009/489/EC, 2009/347/EC In Italy, the legislator has transposed the European directives on energy efficiency through the following rules: 1. Dlgs (Legislative Decree) 16 February 2011 n. 15 on the list of the requirements for energy-related products; 2. Dlgs (Legislative Decree) 28 June 2012, n. 104 on labeling and standard product information of the consumption of energy and other sources for products related to the energy sector 3. DL (Decree Law) 4 June 2013, n. 63 on the energy performance of buildings, recognizing the update of the European targets for energy efficiency 4. DM (Ministerial Decree) 28 December 2012 (“Thermic Account”) on energy efficiency measures for small-scale, with a specific section for the buildings occupied by public authorities on small scale 5. DM (Ministerial Decree) 15 March 2012 (“Burdensharing”) on the regional breakdown of the European objectives The national regulation does not cover extensively the green public procurement. The references below are the main decrees concerning the Italian context: 6. Dlgs 163/2006 (Legislative Decree) recognizing the European regulation on the races.</p> <p>7. DM (Ministerial Decree) 11rst April 2008, defining the goals of sustainability according to product categories</p> <p>The Marche region has a regional law implementing the Directive on GPP since 2008 and has established a regional network on GPP. The public procurement has also been the subject of Effect project funded under the South East Europe, which saw the</p>

	<p>participation of 14 partners from 8 European countries and candidate members for the purpose of introducing efficiency criteria energetica in the notices of the programming period 2014 -2020. The project has an initial phase of design criteria at European level and the subsequent adaptation of the same at the local level. Following training, 7 towns of the Marche Region and the institution of the Conero Park, signed a Memorandum of Understanding in order to use the guidelines produced by the project in the notices of the next programming. In addition Region Marche Development Company (SVIM s.p.a) has made available to the public bodies involved 4 demonstration calls containing energy efficiency criteria: 2 Calls for tenders classic, made with their own funds and financing via third with 2 notices in particular for public lighting and heat management: 2 Calls for tenders classic, made with their own funds and 2 Calls for tender via third with 2 notices in particular for public lighting and heat management.</p>
Results/Success	<p>Concrete good example is third-party financing on public lightening by relying to a multi-year contract by ESCO result. The results are reducing the energy consumption of lightening systems of 35-55%, also elimination of light pollution and reduction of maintenance costs.</p>
Recommendations	<p>The third-party financing is a useful tool for municipalities, as for energy efficiency measures may represent a response to the constraints of the Stability Pact.</p> <p>The solutions proposed in the project were as follows Effect: - the collection of information, awareness raising and training - the objectives of energy-efficient products - the financial instruments - the participatory procedures and cooperation between providers and between public and private sector - the use of knowledge experience / expertise outside - the use of available tools and manuals (es. “Buying Green!” of European Union, ECO LABEL rules (http://ec.europa.eu/ecat) - the definition of a clear regulatory framework for providers and for new requirements - the incentive schemes such as tax exemptions for providers involved - the incentives to curb the phenomenon of preference given to certain suppliers - the promotion of local suppliers certified; creating economies of scale through the use of such as: providing shared public; Use of Energy Management Systems (EMS); networking / exchange (The EU should install as part of the Directive, an online platform for the exchange of experiences and innovative solutions</p>
Contacts	<p>Vanessa Conigli, vconigli@svimspa.it</p>

Sofia	Energy Efficiency and Renewable Sources Fund
Description of the best practice № 31	<p>The <u>Energy Efficiency and Renewable Sources Fund</u> (EERSF) was established through the Energy Efficiency Act adopted by the Bulgarian Parliament in February 2004. The initial capitalization of EERSF is entirely with grant funds, its major donors being: the Global Environment Facility through the International Bank for Reconstruction and Development (the World Bank)- USD 10 million; the Government of Austria-Euro 1.5 million; the Government of Bulgaria-Euro 1.5 million and several private Bulgarian companies.</p> <p>EERSF has the combined capacity of a lending institution, a credit guarantee facility and a consulting company. It provides technical assistance to Bulgarian enterprises,</p>

	<p>municipalities and private individuals in developing energy efficiency investment projects and then assists their financing, co-financing or plays the role of guarantor in front of other financing institutions.</p> <p>The underlying principle of EERSF's operations is a public-private partnership. The Fund pursues an agenda fully supported by the Government of Bulgaria, but it is structured as an independent legal entity, separate from any governmental, municipal and private agency or institution.</p>
Results/Success	n/a
Recommendations	n/a
Contacts	Katya Valkova, k.valkova@sofia.bg
Sofia	Green Sofia Project
Description of the best practice № 32	<p>Gratuitous funding provided by the Municipality to the citizens for the improvement of gardens in residential areas.</p> <p>The Municipality carries out public procurements for the equipment and materials requested by the citizens.</p> <p>The project stimulates civil activity. Cooperation between the municipality and the citizens leads to better quality of life and urban environment.</p> <p>Visible results, which stimulate the community spirit and encourage more procurements.</p> <p>Clear rules should be devised and introduced for the public to follow and transparency to be guaranteed.</p>
Results/Success	n/a
Recommendations	n/a
Contacts	Katya Valkova, k.valkova@sofia.bg

Thessaloniki	Energy Efficient Public Procurement
Description of the best practice № 33	<p>The main national legislation concerning Energy Efficient Public Procurement in Greece is the following:</p> <p>Joint Ministerial Decree Δ6/B/14826/2008, Greek Official Gazette B' 1122) on measures aiming at improving energy saving in the public sector, including:</p> <ul style="list-style-type: none"> - Replacement of old energy-consuming equipment. - Installation of automatic energy consumption control systems in public buildings. - Purchase of machines and peripherals with energy labels. <p>Law No 3855/2010, integrating Directive 32/2006/EC, setting the minimum energy efficiency requirements in procurement procedures for different categories of products within the general public sector and implementing a methodology which aims at minimizing the lifecycle cost of the products purchased and ensuring their economic sustainability.</p> <p>Law No 3982/17/2011/Part 4, integrating Directive 2009/33/EU, which promotes clear and energy efficient vehicles for road transport.</p>

	<p>Ministerial Decision No.12400/1108 (Greek Official Gazette B' 2301/14/10/2011) for the harmonization of the Greek legislation in line with Directive 2010/30/EU of the European Parliament on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products</p> <p>Presidential Decree 7/2011 (Greek Official Gazette A' 14/11.02.2011) on the definition of ecological planning requirements with regard to energy-related products in compliance with Directive 2009/125/EC of the European Parliament and the Council and amendment of the Presidential Decree 32/2010 (Greek Official Gazette A 70) concerning the definition of ecological planning requirements as regards energy consuming products and amendment of the Presidential Decrees 335/1993 (Greek Official Gazette 143/A/93), 178/1998 (Greek Official Gazette 131/A/1998) and Joint Ministerial Decree Δ6/B/17682 (Greek Official Gazette 1407/B/2001) in accordance with Directive 2005/32/EC of the European Parliament and the Council.</p> <p>Presidential Decree 60/2007 (transposition of Directive 2004/18/EC for the award of contracts for products and services), art. 48 on Environmental Management Standards 11 and, art. 53 par. 3β and 6 on technical specifications with reference to environmental characteristics or environmental standards (important although not directly relevant to energy saving).</p> <p>Presidential Decree 118/2007, L. 3463/2006.</p> <p>Law 3851/2010 for the promotion of the use of Renewable Energy Sources (measures for the use of RES in buildings and contributory contributions at local level through the installation of RES units).</p> <p>Law 3661/2008 and Ministerial Decree for the Regulation on Energy Efficiency of Buildings (KENAK).</p> <p>Law 3889/2010 on the Green Fund.</p> <p>Law 4122/2013 on the Energy Efficiency of Buildings – Transposition of Directive 2010/31/EU.</p> <p>Regulation on Energy Efficiency of Buildings – K.E.N.A.K. (Joint Ministerial Decree Δ6/B/οικ. 5825/2010, Greek Official Gazette B' 407)</p> <p>The aforementioned legislation concerning Energy Efficient Public Procurement do not provide for specific targets as to the share of green public contracts against the total public contracts awarded, or for specific quotas with regard to groups of products, which, however, are expected to be set by the National Action Plan for Green Public Procurement</p> <p>Just in August 2010, the country established through state Law 3855/2010, a Joint Ministerial Committee to proceed to the “drafting of an Action Plan to promote Green Public Procurement and submission of proposals for national policy making”.</p> <p>The Committee aspires to ensure the support and the prompt supply of information to the public contracting authorities and to the market suppliers. Their role consists in forming a cooperation framework through the creation of working groups and in coordinating all the necessary actions to develop environmental criteria and select specific products and services for the criteria to be applied.</p>
Results/Success	<p>In Greece, energy saving could constitute one of the most significant national resources. In this framework, public procurement may contribute to the energy saving and have a</p>

	<p>crucial impact on the overall energy balance of the country and its input as far as the greenhouse effect is concerned. Although some encouraging steps forward have been taken, mainly with regard to the adoption of European requirements, the sector of procurement is still at an early phase and requires further implementing legislation and regulations, as well as the mobilization of the competent authorities.</p>
<p>Recommendations</p>	<p>The main barriers <u>faced by public authorities</u> in up taking energy efficient public procurement (Survey in the framework of EFFECT Project/South East Europe Programme, 2012 – National Report on recommendations about Green Procurements’ support in Greece, Program Buy Smart +) can be summarised as follows:</p> <p>General problems:</p> <ul style="list-style-type: none"> • Lack of available financing aggravated by the recent national financial crisis that hinders the procurement of goods with higher initial cost • Lack of life cycle analysis – the initial price is the main criteria for procurement • Lack of expertise in green procurements, unfamiliarity with the life cycle analysis as a method to evaluate alternative offers during a call of tenders’ procedure • Lack of clear and concise national legislative framework concerning the energy efficiency of products and services • Inability for public authorities to finance an investment through the savings from operational costs due to the budgetary policy of the public sector • Lack of rules and procedures for integrating energy efficiency aspects in procurement tenders and contracts <p>The conclusion and the application of the National Action Plan for Green Public Procurement is expected to help in the direction of overcoming the barriers connected to the legislative framework.</p> <p>Furthermore, the following measures could assist to the promotion of Green Procurement:</p> <ul style="list-style-type: none"> • Adoption of green requirements in the technical specification of public procurement through legislation • Transposition of Directive 2011/0438 to the Greek legislation, especially regarding Life Cycle Analysis as an award criteria • Drafting of a guide that will include the methodology on how a local authority could incorporate environmental award criteria/ Good practices • E-procurement for all public procurements will lead to energy consumption reduction and minimization of the bureaucracy • Common procurement procedures for products or services for many public authorities in order to ensure better prices and reduce the bureaucracy and the management costs (especially for small municipalities) • Evaluation of Green Procurement by the Single Independent Authority for Public Procurement • Key organisations (energy agencies, etc) must play a crucial role in dissemination and training of the personnel of public authorities involved in the public procurement procedures.

	<ul style="list-style-type: none"> - Efforts must be made to ensure funding of green procurement projects (i.e. purchase of green cars, LED street lighting) through European Structural Funds and/or the National Green Fund. Promotion of Energy Services Companies.
Contacts	Τσικώτη Ιωάννα Δ/ση Αστικού Σχεδιασμού και Αρχιτεκτονικών Μελετών Δ.Θεσ/νίκης, i.tsikoti@thessaloniki.gr

Zagreb	Public services should be served in a way that provides maximum public benefit to the local community. Because of that, public procurement should take social value into account, financing RES to ensure that the full weight of the public sector's purchasing power is directed at achieving social and environmental benefits alongside financial efficiency.
Description of the best practice № 34	The effectiveness and the efficiency of current and future RES support schemes is analyzed with specific focus for renewable electricity products. Current best practices are identified, and (future) costs of RES and the corresponding support necessary to initiate stable growth are assessed. Better integration of RES policies with climate and innovation policy as well as liberalized energy markets should be analyzed and promoted. Options for flexibility between different levels of services, directorates and Ministry are crucial. d. The future deployment of RES in sector will be calculated based on the Green-X model to achieve implementing national action plans and to support a long term vision of the European RES policy.
Results/Success	n/a
Recommendations	The cheapest tender is not usually the most technically suitable, but it must be taken. It is very hard to justify tender which is not the cheapest offer. The first bottleneck is deadlines which are strongly influenced into length of procurement notice and second is appeal commission which decision is very rigid - according to unclear legislative regulations. Unfortunately, their decision is obligated. We strongly recommend adjustment of national legal frame for procurement notice so it should be same as regulations for EU.
Contacts	Alen Lešić, alesic@mup.hr

The Envision 2020 project partners have provided eight filled in questionnaires on the topic.

Potenza proposes a practice for tender in the field of the liberalization of the gas natural market (GP28) and underlines the need of building partnership as an effective instrument in view of an effective collaboration between governments on joint development projects in their belonging territories (GP27). Maribor, Fermo and Sofia share their public procurement good practices in the sphere of transport (GP29), lightning (GP30) and environment (GP32).

The partners from Thessaloniki (GP33) and Zagreb (GP34) shortly describe the legislative framework in the field and point out the necessary improvements and changes in the rules in order to better foster the energy saving and the greening of the public procurement in their countries.

5.3 Public-Private Partnership

Fermo	Project financing
Description of the best practice № 35	Project financing, leasing ex art 160 bis, contract of availability ex art. 160 ter. Efficiency of municipal public lighting installations, duration 20 years.
Results/Success	Adequate planning of interventions, Quality of contract documents
Recommendations	Adequate planning of interventions, preventive dialogue with operators intended to carry out the intervention
Contacts	Alberto Scalchi, BOSCH Energy & building solutions, e-mail: alberto.scalchi@it.bosch.com

Bucharest	Waste to Energy Plant – Timisoara / project managed by International Recycling Energy S.A. (IRE)
Description of the best practice № 36	Considering the European Directive 2008/98/EC related to "zero wastes", and due to "Parța-Șag landfill" closure, since January 2009 in accordance with Government Decision no. 349/2005, Timișoara City Council was forced to reconsider its strategy on municipal wastes management. Thus, since the 2009 Timisoara Municipality examined ways to eliminate wastes and use their electricity and heat generation potential, integrated in a long term (20 years local sustainable development strategy. To this aim IRE was established by the City Council Decisison no. 302/27.09.2011 having as main goal to cogenerate electricity and heat as based load, using as fuel the sorted urban wastes collected in the City. IRE Company was entrusted through a legal document (Local Council Decision for establishment), to play the role of a special public service in the energy sector (according to the EC Communication 2012/C8/02). Setting up IRE aimed achieving a modern high-efficiency cogeneration plant for Timisoara Municipality, burning alternative fuel based on municipal wastes, which satisfy the energy efficiency criteria related to the EU Directive 2004/8/EC. IRE Company will produce electricity - sold and delivered via the electrical substation Timisoara Sud CHPP to the NPS market and heat - supplied to COLTERM S. A. for the local DHS. The cogeneration plant will be located inside the existing Timisoara Sud CHPP covering a site of about 7800 sm. The alternative fuel will be delivered by the sorting station, located in Calea Sagului neighborhood – near Timisoara Sud CHPP precinct. In order

	<p>to achieve the project objectives, namely energy recovery from municipal wastes and reduced natural gas consumption, the following main equipment was recommended as the best technological solution: 1/ Fixed bed combustion installation (9375 tons/h alternative fuel and 1.310 tons/h BIOCOAL; 2/ Steam Boiler (37 t / h, 45 bar and 430 ° C) including a flue gas treatment plant; 3/ Condensing steam turbine (min. 5.5 MWe and min.14 MWt) § Power generator 7.5 MVA The financial mechanism of IRE project "Waste-to-Energy Plant - Timisoara" is the following: a). The Contractor (International Recycling Energy SA - IRE) will pay to the General Contractor – the Consortium ROMELECTRO SA - Baumgart BOILER SYSTEMS GmbH the credited contract's amount which is equal to 90% of the total contract value, including VAT and the cost of co-financing by means of promissory notes b). The amount paid directly, that is equal to 10% of the total contract value including VAT, shall be paid by the Contractor (International Recycling Energy SA) periodically during the execution of the works, on the basis of work situations c). Promissory notes will be issued in Euros, payable in RON at the reference rate of the National Romanian Bank in the day of payment.</p>
<p>Results/Success</p>	<p>The new investment will recover the energy potential of about 78,750 tons/year of alternative fuel from solid municipal wastes and BIOCOAL resulted from the fermentation of biodegradable fraction, in a high-efficiency cogeneration unit including: § 1 x boiler (min. 37 t/h steam, min. 42 bar, 430 ° C) § 1 x turbo generator (min. 5, 5 MWe and min. 14 MWt). The cogeneration plant must observe the European emissions standards, ensuring at the same time dry ash and slag ecological system removal. The project aims basically two objectives: § Cutting out the sorted and disposed solid municipal wastes quantity by recovering the energy through a high-efficiency cogeneration unit. § Reducing methane of about 16 million cm /year by replacing it with this alternative fuel The technical – economical requirements that must be met by the new WtoE Plant are: § good working conditions and operation safety § optimal location (site, existence of utilities platform, access roads, NPS interconnection, etc.) § lower operation costs § maintenance provided § compliance with environmental standards</p>
<p>Recommendations</p>	<p>Our recommendation for replication is to develop an energy recovery of alternative fuel from municipal wastes by creating similar facilities, but before transferring best practice and know how in a new location, we must carefully assess the current legal framework, local conditions, solid municipal wastes quantities and making further steps only if the feasibility study gives a positive assessment.</p>
<p>Contacts</p>	<p>Ioan Samuila, General Director, IRE; ioan.samuila@gmail.com</p>

There are only two shared practices in the field of public private partnerships. Fermo proposes the project for lightning of the city as an example of third party financing and ESCO (GP35).

Bucharest describes the investment project for waste to energy plant implemented in the Municipality of Timisoara as a good practice for public private partnership (GP36).

Nevertheless, we can also count here at least five of the practices cited as innovative financial instruments like the one of Fermo – GP7, of Maribor – GP4 and GP5, of Thessaloniki – GP14 and of Zagreb - GP22.

Eventually from the fact that the partners propose only two good practices about public private partnerships the consideration that the countries do not have enough experience or their experience is rather contradictory can be derived.

5.4 Publicly Owned Enterprises

Potenza	ACTA waste management
Description of the best practice № 37	ACTA is a company with total participation of the Municipality of Potenza. Provides for the collection and disposal of waste in the Municipality of power and has the management of public parks. Certainly. Dedicated funding can bring benefits in the facility of our society The Municipality of Potenza, the sole shareholder of ACTA, has expertise in the energy field and it operates by transferring funds to ACTA.
Results/Success	Its expertise is even in the management of public parks. The City has expertise in energy matters compared to what lies with the municipal housing and public. ACTA is being programmed in relation to renewable energy sources with the goal of raising the percentage of recycling and reusing of materials disposed.
Recommendations	Much can be done by incentivizing the collection with bonuses for the citizens. Support and promote the protection of the environment to start the use of renewable energy sources. With this in mind, public and private actors should promote the achievement of systems and RES technologies and create a system of financial and technical support that raises awareness of the territory to energy saving and the use of alternative energy with the aim of promoting a network of operators in sector.
Contacts	Silvio Ascoli CHO info@actapotenza.it
Potenza	APEA
Description of the best practice № 38	The National Authority Agency is the body that supports the Province of Potenza in policies and energy planning. The areas of work are the heating systems of monitoring and control of the issues of greenhouse gases. It Participates in European projects, but does not receive nor managed funding for renewable sources (Which typically deliver in the Italian Regions and the State through the example GSE) Certainly, dedicated funding can bring benefits for the Agency

Results/Success	<p>The Province of Potenza, our owner, has no competence on energy, for that reason does not manage funds, nor can transfer them to APEA.</p> <p>Instead, it is the competent institution on the school buildings, on which it has installed PV plans as a result of specific funding.</p> <p>APEA, as an observer provincial energy policy, is convinced that Italy lacks a clear strategy in the long term that encourage RES and makes sure the investments and the economic returns to the enterprise.</p>
Recommendations	<p>The promotion of RES should not be supported by direct funding grants, but through:</p> <ol style="list-style-type: none"> 1. Immediate tax relief, 2. Giving certainty about the time of the investment (not sporadic calls but structural planning in the long term), 3. Diverse management of regional tenders (rather than a grant, but with performance reached, with strict controls in progress) 4. Using the Provincial support to improve programs of information and education on the energy items.
Contacts	<p>Ing. Vincenzo Molinari: energia@apeapz.it</p>

Bucharest	Geothermal HVAC System at ELI-NP Project
Description of the best practice № 39	<p>-Extreme Light Infrastructure – Nuclear Physics (ELI-NP) will be a new Centre for Scientific Research to be built by the National Institute of Physics and Nuclear Engineering (IFIN-HH) in Bucharest-Magurele, Romania. ELI-NP is a complex facility which will host two state-of-the-art machines of high performance in the field. Related to the HVAC utility supply with thermal energy – at ELI-NP this will be achieved by using the energy potential of the on-site existing geothermal resources. To this aim geothermal HVAC System will be used for heating and air conditioning by exchanging heat with the earth via GSHP (Ground Sources Heat Pumps). In accordance with local regulatory framework*, if rules will not change until the commissioning of the research facility, and considering the fact that the thermal energy on site demand is supplied from geothermal resources, this project will benefit from the green certificates supporting scheme. The green certificate supporting scheme applies to producers who have RES production capacities and are accredited by ANRE. Accredited producers benefit from a number of green certificates issued monthly by the market system operator OPCOM, proportional with the quantity of electricity and heat produced from renewable sources. As a producer of green heat IFIN HH will benefit from this financial facility for the thermal energy produced from geothermal resources for the research facility internal consumption (HVAC). (*) Law no. 220/2008 on establishing the promotion system of energy production from renewable energy sources, with amendments and additions as the Government Emergency Ordinance no. 88/2011, approved by Law no. 134/2012.</p>
Results/Success	<p>This system is expected to considerably reduce the consumption of classical resources. The project is still in the implementation phase.</p>
Recommendations	<p>NA in this moment</p>

Contacts	Dr. Constantin Ivan; constantin.ivan@eli-np.ro
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The Envision 2020 project partners propose three good practices on the topic of publicly owned enterprises as a whole. Two of them are the examples of Potenza for ACTA – municipal company for waste and public parks (GP37) and APEA – the National Authority Agency supporting the Province of Potenza in policies and energy planning (GP38).

The partner from Bucharest describes a Centre for Scientific Research to be built by the National Institute of Physics and Nuclear Engineering (IFIN-HH) in Bucharest-Magurele, Romania utilizing the energy potential of the on-site existing geothermal resources (GP39). The practice for the Waste to Energy Plant – Timisoara (GP36) given as an example in the sphere of public private partnership can be also considered within the topic of publicly owned enterprises.

5.5 Other financial instruments

Maribor	Eco Fund	
Description of the best practice № 40	<p>Eco Fund was formed in 1993 as one of the national policy to achieve 2020 goals. It is the largest financial institution for promoting environmental investments in Slovenia. It supports environmental investments that are consistent with the National Environmental Action Plan and the environmental policy of the European Union. Program loans for environmental investments of legal persons and individual entrepreneurs include investments greenhouse gas emissions mitigation, mitigation of air pollutants, effective waste management and protection of water. Eco Fund is not the only institution in Slovenia which offers grants for EE and RES investments but their funding are mostly oriented towards households. Each year new calls for loans and subsidies/grants are launched specially for citizens/households.</p> <table border="1"> <tr> <td> <p>Households; investments in single dwelling and two dwelling residential buildings</p> <ul style="list-style-type: none"> - solar heating system <ul style="list-style-type: none"> • wood biomass boiler for central heating • heat pump • first central heating system in the case of first connection to district heating on renewable energy sources • replacement of old windows with energy efficient wooden windows • thermal insulation of the façade • thermal insulation of the roof • heat recovery ventilation • low-energy or passive residential building • purchase of individual dwelling in three or more dwelling buildings, constructed or retrofitted in passive standard </td> </tr> </table>	<p>Households; investments in single dwelling and two dwelling residential buildings</p> <ul style="list-style-type: none"> - solar heating system <ul style="list-style-type: none"> • wood biomass boiler for central heating • heat pump • first central heating system in the case of first connection to district heating on renewable energy sources • replacement of old windows with energy efficient wooden windows • thermal insulation of the façade • thermal insulation of the roof • heat recovery ventilation • low-energy or passive residential building • purchase of individual dwelling in three or more dwelling buildings, constructed or retrofitted in passive standard
<p>Households; investments in single dwelling and two dwelling residential buildings</p> <ul style="list-style-type: none"> - solar heating system <ul style="list-style-type: none"> • wood biomass boiler for central heating • heat pump • first central heating system in the case of first connection to district heating on renewable energy sources • replacement of old windows with energy efficient wooden windows • thermal insulation of the façade • thermal insulation of the roof • heat recovery ventilation • low-energy or passive residential building • purchase of individual dwelling in three or more dwelling buildings, constructed or retrofitted in passive standard 		

	<p>Households; joint investments of energy reconstruction of three or more dwelling residential buildings</p> <ul style="list-style-type: none"> - thermal insulation of the façade - thermal insulation of the roof - installation of central heating devices on renewable energy sources - installation of thermostatic valves and hydraulic balancing <p>In 2013 there were € 49,8 million of total tendered funds (soft loans: € 29 million; grants: € 20,8 million). Eco Fund generates revenues from interest on loans granted, by cost reimbursement for the implementation of the allocation of grants, transfers from the state budget for the implementation of the Programme of spending fund of Climate Fund, for service conclusion of the credit agreement and for the management of credit in accordance with the agreed tariff rules of Eco Fund.</p> <p>Until the year of 2013 25 % of investment was the highest value of the grant. In the year 2014 there were additional funding provided from the Climate Fund for the areas defined as degraded in terms of air quality and Municipality of Maribor (MOM) is one of them. For the year 2014 citizens of MOM could get a grant in the amount of 50 % of investment for specific EE and RES investment. Soft loans at interest rates lower than market rates:</p> <p>Funds available in 2014 for the current public call for citizens: 5 million EUR</p> <ul style="list-style-type: none"> •Interest rate: 3-month EURIBOR + 1.5 % •Range of the loans: from 1,500 EUR to 20,000 EUR or even up to 80,000 EUR with some more elaborate investments such as purchase or construction of low-energy or passive buildings •Period of repayment: up to 10 years <p>Non- repayable subsidies (grants)</p> <p>Funds available in 2014 for the current public call for citizens: 13,5 million EUR</p> <p>Eligible investments in buildings for which Eco Fund allocated grants under public calls for citizens:</p>
<p>Results/Success</p>	<p>Eco Fund is actively working for more than 20 years. Activities of the Fund were from the beginning focused exclusively on favorable loans, from 2008 onwards there are also grants available for EE and RES investments, especially for households. Each year more and more people decide to invest in EE or RES under Eco Fund calls. In the year 2014 citizens of the Municipality of Maribor can obtain 50 % grant for sustainable energy investment in buildings. Accompanying successful activity of the Eco Fund is energy advising for citizens. There are 51 energy counselling offices in the network called ENSVET which provides information on current public calls, application process and technical energy topics.</p> <p>In the last 5 years there was 168.785 ton of CO2 save each year in Slovenia because of the citizens EE and RES investments undertaken with the help of Eco Fund grants and loans.</p> <p>Effects:</p> <ul style="list-style-type: none"> - From the year 2008 to 2013 69,4 million € of grants were allocated to households for 48,993 investments

	<ul style="list-style-type: none"> - For the year 2012: investment in residential buildings for which Eco Fund grants were approved is contributing to lower energy consumption of 150 GWh per year, thereby reducing CO2 emissions for more than 25.600 tons per year. - For the year 2012: investment in residential buildings for which Eco Fund loan were approved is contributing to lower energy consumption of 4,6 GWh per year, thereby reducing CO2 emissions for more than 775 tons per year. <p>Other positive effects:</p> <ul style="list-style-type: none"> - Sustainable decisions of investors - citizens - Environmental effect - Grey economy decrease, budget revenues increase, jobs - Adaptation of the building business in sustainable direction - Encouraged use of strategic materials (wood) <p>Grants and favorable loans stimulated and encouraged citizens to invest in EE and RES in buildings. Until now at least one of Eco Fund's grants was allocated to about 10 % of Slovenian households. Important achievement is also raising the level of awareness about energy issues among Slovenian residents. It is evident that after the first successful application for grant a lot of people decided for the second one, also because of archived energy and money savings.</p>
Recommendations	<p>The fund should be public fund. The financial sources should be guaranteed through the national budget structure and line to some environmental taxes. In this way the financial resources are more stable and not depended on the each year budget possibility or restrictions.</p>
Contacts	<p>ekosklad@ekosklad.si</p>

Thessaloniki	Retrofit project
Description of the best practice № 41	<p>Periodically opportunities arise to install RES and energy efficient systems in the framework of demonstration projects or part of research projects, at public buildings. In addition to research, participation in European or national R&DD projects enables the development of practical tools to support end-users in the techno economical assessment of RES applications in buildings, facilitate the assessment of potential energy savings and the promotion – dissemination in the market.</p> <p>A retrofit project to improve overall indoor conditions and energy performance of a neo-classic office building used by NOA's administration, included several interventions in the building envelope, heating and cooling systems, electrical installations and control systems, which were selected as to preserve the building's historic identity. The refurbishment improved the indoor environmental quality and increased employee satisfaction. The annual total energy consumption was reduced from 214 kWh/m² to 130 kWh/m² after retrofitting. The project was co-financed by the European Commission, DG Energy, through the THERMIE Program.</p>

Results/Success	n/a
Recommendations	<p>First cost, due to very limited cash flow; recent budget cut backs made things even worse.</p> <p>Understaffed technical departments and lack of time to initiate such efforts and fight the bureaucracy of the public sector.</p> <p>Eventually, compliance with the European directive on the energy performance of buildings and energy efficiency will enforce relevant implementation in public buildings, but this will probably take time in Greece.</p> <p>Presumably, ESCOs could play a significant role and facilitate even the public sector with the implementation of RES and energy efficient measures in public buildings. However, the ESCO concept has not flourished yet in Greece.</p>
Contacts	Costas Balaras costas@noa.gr

Bucharest	Recovery and superior valorification of landfill gas by cogeneration of heat and electricity
Description of the best practice № 42	<p>Iridex is the owner and operator of the facilities of the Integrated Waste Management Center Bucharest, located near Chiajna, in the West of Bucharest. IWMC Bucharest comprises a sorting and mechanical treatment station of municipal and industrial waste, biological treatment of biodegradable fraction of waste and a landfill. Since 2010 has been implemented the collection and recovery system for landfill gas, which include gas extraction wells, pipelines network, gas extraction units and CHP units for energy production. The project currently operates with two CHP units with a total installed capacity of approx. 2.4 electrical MW and 0,6 thermal MW . It is expected that by the end of July 2014 will be put into operation the third CHP that will improve the installed capacity up to approx. 3.6 electrical MW and 1,8 thermal MW. Two of the three CHP units are equipped with heat recovery, which is used for internal consumption. In order to improve the quality of gas, the project include a unit of biological desulfurization of gas, ensuring the reduction of hydrogen sulfide and partially suspended particles.</p> <p>In accordance with local regulations, for this project is applicable the system to promote energy production from renewable energy sources. The green certificate promotion applies to producers who have production capacities from renewable sources and are accredited by ANRE. Accredited producers benefit from a number of green certificates issued monthly by the distribution system operator, proportional with the quantity of electricity produced from renewable sources. As a producer of electricity and heat from renewable sources Iridex benefit from this facility for electrical and thermal energy produced from landfill gas exploitation.</p>
Results/Success	<p>The project successfully implemented by Iridex contribute significantly to achieving the targets assumed by Romania as a member state of the EU, in terms of meeting the objectives for climate change and energy (20/20/20). As the result of the Accession Treaty, Romania must respond simultaneously to several requirements: - Increased energy efficiency - Promotion of high efficiency cogeneration - Promotion of renewable energies - Compliance with environmental requirements, compliance with emission limits polluting All these requirements are fulfilled proportional to plant capacity, by reducing emissions of greenhouse gases, harnessing renewable energy, high efficiency</p>

	<p>cogeneration. The assessment of the success factors in this project is given by the opportunity to exploit and valorification of a resources available imediatly and on a long term, taking into account the operation and management mode of the landfill, lack of other similar facilities and a favorable legal framework. The project is “revenue” generator, and from this point of view, besides the advantage of good payback on initial investment, contribute significantly to the company's success in a competitive market</p>
Recommendations	<p>Based on the experience gained through this project, Iridex recommend this success model applicable primarily to operators and owners of landfills. Although it requires a relatively large initial investment, the project can be considered a revenue generator, taking advantage also of the favorable legal framework. However, lately, it is promoted increasingly the biological treatment of biodegradable waste in simple MBT installations. This is a factor that can reduce the attractiveness of cogeneration projects using landfill gas, because the generation of the gas within the landfill is based on anaerobic digestion of biodegradable waste. If landfilling is done after biological stabilization of waste in simple MBT plants, the amount of gas generated will be reduced substantially, and such projects will no longer be applicable. It is worth to note that the simple MBT plants are actually, energy-intensive and fuel consumers, and in some cases, the environmental benefits of treatment and biological stabilization may be less than the pollution produced by the process itself (exhaust gas emitted by machinery, energy for intensive aeration, wastewater treatment, etc..)</p>
Contacts	<p>Liviu Birau, Executive director, liviu.birau@iridex.ro</p>
Bucharest	Wind Power Plant Baia
Description of the best practice № 43	<p>Baia Wind Power Plant (WPP) is located close to Baia village, which is approximately 60 km north of Constanta, Romania. Baia WPP has 10 MW installed capacity and was designed based on ISPE engineering work, being developed by Blue Planet Investments Company within the following main stages: § licensing of the first 35 MW; § building the first four turbines and all the common facilities of the 35 MW wind park (electrical 20/110KV substation, the overhead electrical line and SCADA fiber optic channel); § building the balance of the 10 turbines to be installed within several stages, in the next period of time;</p> <p>Currently, Baia WPP has 4 x wind turbines completed - being under commissioning stage, as well as the common facilities for the entire wind park (20/110 KV electrical substation, as well as the 110 KV overhead electrical line). The entire wind farm will consist of 14 GE turbines x 2.5 MW each, providing a total installed power of 35 MW. The construction works were started on November 1, 2010. In the next period of time 10 turbines is to be installed within several stages. In the same time, Blue Planet carries out all the necessary procedures in order to get the permits and licenses needed for commercial operating of the wind park. In accordance with the national legal and regulatory framework, for projects generating green energy is applicable the “Green Certificates” mechanism which promotes and support the use of renewable energy sources. BLUE Planet is a producer certified and accredited by ANRE (National Regulatory Authority). Accredited producers benefit from a number of green certificates issued monthly by OPCOM – the National Electricity Market Operator which manages also the Green Certificates (GC) national market. OPCOM allocates to the green</p>

	<p>electricity producer a number of GC proportional with the quantity of electricity produced from renewable sources.</p> <p>Law no. 220/2008 on establishing the promotion system of energy production from renewable energy sources, with amendments and additions as the Government Emergency Ordinance no. 88/2011, approved by Law no. 134/2012. Annual mandatory quotas of green certificates (GC) by suppliers are established and published by ANRE and the transaction is secured by the Electricity Market Operator (OPCOM), which establishes and publishes the weighted average purchase of GC.</p>
Results/Success	Blue Planet through this project generated during 2013 about 26 GWh annual green electricity, thus raising the national share of renewable energy use and reducing the amount of CO2 emissions – bringing its contribution to the fulfilment of Romania 20/20/20 national targets.
Recommendations	Baia WPP is a replicable project but before transferring the best practices to a new location we have to carefully assess the current legal framework, the TSO and DSO policy and strategy in the region, and local area climate and wind conditions and making further steps only if the Feasibility Study delivers a positive evaluation.
Contacts	Orlando SILIANOVICI, executive director; orlando.silianovici@blueinvestments.ro
Bucharest	RENEWABLE ENERGY COGENERATION PLANT USING BIOGAS
Description of the best practice № 44	<p>- Biogas station built in Filipestii de Padure, Prahova County is a project initiated, developed and funded entirely by Genesis Bio partner Holding and has a production capacity of 1MW/h electricity and 1.2 MW/h thermal and processes a daily amount of 49 – 55 tons organic substrate, as results from both agricultural activities and food industry processes (organic wastes, deteriorated food), the total required investment being of about 5 mil.EUR. The implementation of this unique project, in Romania at the time, began in June 2012 aiming to produce renewable energy in cogeneration (electric and thermal) on the site. The station provides to the local client the thermal energy produced in cogeneration and the electricity is delivered in the National Power Grid, providing a predictable supply of over 8000 hours/year, with the possibility of primary energy storage (biogas). This project contributes to the development of three priority areas in Romania: energy, agriculture and environmental protection, CHP being useful to any industrial consumer that uses thermal energy in the process (hot water, steam or hot air). The beneficiary of this project is a food industry, which will benefit from a decrease in the production costs by receiving a significant amount of process steam at a much lower tariff than in the past, as well as from an effective waste management from meat processing.</p>
Results/Success	<p>Environmental oriented biomass and waste processing technology;</p> <ul style="list-style-type: none"> • Delivering the natural fertilizer from the biogas station for agriculture use; • Thermal energy supplied to our industrial client and partner; • Jobs creation in the area, both in agriculture and local industry; • More than 70% of the biogas cogeneration plant procurement process was performed within the Romanian market (products and services); • Incomes generated by the green certificates supporting scheme are increasingly invested in Romania; • Balancing and compensating the power peak produced by other RES, such as solar and wind energy, by cogenerating heat and power constantly and continuously <p>A success story always brings follow-ups - Currently Genesis Biopartner is performing</p>

	feasibility studies for other locations. Additionally they are seeking for other partners to develop in their area biogas cogeneration plants, interested in raising their energy efficiency, lowering their production costs and constantly protecting the environment.
Recommendations	GENESIS BIOPARTNER is a real success story which can be replicated in industries using thermal energy during the technological process. The station currently operates with biogas based on energy crops (corn silage) and waste, produced by the meet Factory and expired food as margarine, potatoes, yoghurt.
Contacts	Cristinel Popescu, Administrator; cristinel.popescu@genesisbiopartner.ro

Chapter 6. Review of the Compendium - Evaluation of the Collected Good Practices

The partner consortium have managed to collect and complete 70 questionnaires as follows:

- 12 – Maribor;
- 10 - Fermo;
- 9 – Zagreb;
- 6 – Thessaloniki;
- 13 – Potenza;
- 15 – Bucharest;
- 5 - Sofia.

All partner cities included very different and various examples for financing RES and new forms of energy. From the received information it is possible to conclude that for all of them **the most important financial sources are the EU grants and funds**.

In more than 38% of the given examples the EU grants are a significant part of the foundation of different national and regional eco funds, also a lot of good examples are consisted of different EU projects for RES, etc. Among the cited examples there are application of ELENA Program, JESSICA and Intelligent Energy for Europe Programs and of course the operational programs of the EU for renovation of buildings, etc.

An exception of is the City of Bucharest: they mainly pointed out examples of private investments on RES and on new forms of energy.

Other very important financial instruments are **the national and regional (municipal) grants and funds**. They are also considered as basic instruments in 35% of the pointed good examples for financing RES. Comparing to the EU grants the received difference is very small only 3% which means that the regions and cities although still possess a lot of gaps in their regional policies and strategies for developing the RES sectors they provide a considerable amount of the regional and local budgets for investments in RES.

The City of Zagreb is an example for using national and regional grants and funds to encourage not only companies but also citizens to invest money in RES. The examples are classified as innovative and present a way how the purchase of electric and hybrid vehicles as well as the purchase and installation of RES could be subsidized. Another good example is the Kozloduy International Decommissioning Support Fund (KIDSF) in Bulgaria, which supports mainly projects related to the construction of new generation power plants.

The third place for financial sources is given to the **innovative financial instruments** as ESCO contracts and Green mortgages with about 17% of the pointed examples. In some of the cities as for example Fermo, Potenza and Bucharest the ESCO contracts are very well known and are using for changing the public lighting and building waste treatment plants. In Sofia the ESCO example is also known however for the municipal sector it is not very well developed.

The **bank loans** are also used for financing RES however here we have to underline the fact that in most cities the loans are received from EU banks as EBRD and EIB. The percentage is almost 7% and this is also indicative that the bank institutions are not recognized as a basic source for financing RES. The national and local banks are even more excluded regarding the RES investments due to not very well developed bank policies for EE investments.

The **private investments** are on fifth position. It is important to underline that in Romania they are one of the main sources for investments in RES and they are used in producing electricity and thermal energy from landfill gas exploitation, biogas, etc.

- I. The survey in **Maribor** led to 12 completed questionnaires for best practices and needs and gaps in financing RES. Some of the best practices that were pointed are:
- Introducing CNG in the public transport of Ljubljana – by public procurement procedure;
 - Wood district heating system Miren – by innovative financial instrument;
 - Slovenian Environmental Public Fund – Eco Fund – EE and RES incentives for citizens – other financial instruments (soft loans and non-repayable subsidies);
 - TES – Thermal Power Plant Sostanj project with EIB and EBRD loans support;
 - Eco Funds and tenders of large energy companies that can support the financing of RES – public procurement practice
 - State (local) authorities` subsidies – public-private partnership
 - Energy Performance Contracting – publicly owned enterprises
 - Combined method of several instruments (f. ex. for reaching EE in buildings to combine credit from Eco Fund, grants and private investors) – innovative financial instrument.

The basic problems and bottlenecks that were defined are:

- Legislation on state and local level, regarding the field of financing RES and new forms of energy;
- the world economic crises, as well as the economic situation and conditions in the country;
- bureaucracy or slow and long administrative procedures with unclear and unexpected results;
- lack of interest and knowledge and experience among the local administration employees regarding the EE field as a whole and its financing;
- a lot of administrative taxes and waste of time for communication with the local authorities;
- lack of clear strategy on local level for introducing RES
- restrained funding from the commercial banks;
- lack of knowledge among the citizens regarding their opportunities in EE renovation of their homes for example

The recommendations given by the respondents in **Slovenia** are:

- Changes in the legislation;
- Better coordination and cooperation between state and local authorities;
- Stronger support from the bank sector and better conditions for the bank clients;
- Simplification of the administrative procedures regarding the procurement processes;
- Simplification of the tender documents and tax payments;
- Higher state and local authorities` subsidies in EE;
- Better informed citizens;
- Finding foreign private investors;

- Raising awareness in city administration;
- Introduction of pilot projects;
- Clear criteria for using grants.

II. **Fermo** Municipality has completed 10 questionnaires on the best practices and needs and gaps in financing RES. Some of the best practices are as follows:

- Third-party financing on energy efficiency projects and public lighting – a public procurement practice;
- Energy Efficiencies Certificates (White Certificates) – an innovative financial instruments;
- Co-funding of energy audits and feasibility studies to EPC contracts (Energy Performance Contract) – an innovative financial instrument;
- PSR regional funds used to promote RES in rural areas – innovative financial instrument;
- European funds and projects – public procurement practice example and public-private partnership example;
- Pilot, demonstration projects – public procurement practice;
- Investment funds and foreign investors – innovative financial instrument;
- Mini bonds, finance bills and dedicated investment funds – innovative financial instrument;
- Incentives for energy count and thermic count – innovative financial instrument

The pointed weaknesses and problems are the following:

- Bad coordination and cooperation between the authority bodies, agencies and institutions;
- Lack of clear rules in the procedures;
- Lack of knowledge in the authorities as well as in the citizen community;
- Complicated bureaucracy – problems in communication between authority and citizens;
- Banks are reluctant to participate in tenders;

The recommendations given by the respondents are:

- Raising awareness and training of the administration;
- Better cooperation between public and private sectors
- To use LABEL rules;
- Clear frameworks, definitions and requirements for the providers
- Lower taxes for the investors in RES
- Second level guarantees by higher authorities, f.ex. regional ones
- Simple and reduced bureaucracy.

III. The Municipality in **Zagreb** has managed to present 9 completed questionnaires for best practices and needs and gaps in financing RES. Some of the best practices are:

- Environmental protection and energy efficiency fund – an innovative instrument
- Regional fund of the City of Zagreb – an innovative financial instrument;
- HEP ESCO and the City of Zagreb – an innovative financial instrument;
- Program Sava D.O.O – an innovative financial instrument;
- Eco Fund – innovative financial instrument;
- Grant Aid from the Central Finance and Contracting Agency – innovative financial instrument;

The presented bottlenecks are as follows:

- Long procurement procedures;

- Unclear legislative rules and regulations;
- Lots of restrictions and quotas for the citizens;
- Bureaucracy;
- Lack of knowledge and experts in the authorities; financial and administrative literacy

The proposed recommendations are:

- To maximize the public benefit to the local community by the public services;
- The public procurement procedures should include the social value in them;
- Adjustment of the local and national legislation to this of the EU;
- More financial instruments for SMEs sector with focus on the “green sector”;
- Requirements for individual approach to every entrepreneur

IV. The Municipality in **Thessaloniki** conveyed the survey with a result – 6 completed questionnaires.

The following good practices were proposed by them:

- ESCO companies – innovative financial instrument
- European projects and programs – (JESSICA) – innovative financial instrument
- Soft loans form credit institutions – innovative financial instrument
- Income tax relief – innovative financial instrument
- Subsidies from the government – innovative financial instrument

The bottlenecks and problems they are facing with are:

- Political and financial uncertainty;
- Lack of active market for specific financial schemes
- Lack of project maturity
- Bureaucracy
- Time-consuming procedures
- Complex management and implementation system
- Lack of standardized measurements and verification practices
- Complex book-keeping rules
- Lack of rules and procedures for integrating energy efficiency aspects in procurement tenders and contracts
- Lack of experts in green procurement
- Lack of life cycle analysis
- Gaps in the legislation on local and national level

The proposed recommendations are:

- E-procurement for all public procurement
- Clear legislation for green procurement procedures
- Drafting a methodology for local authorities how to incorporate good practices
- Standard measurement and verification processes
- Clearer book-keeping rules for the public sector
- Changes in the legislation
- Promotion of the financial instruments
- Increasing the role of the ESCO concept
- Simple procedures and less bureaucracy.

- V. The survey in **Potenza** led to 13 completed questionnaires that include the best practices as well as gaps and recommendations. Some of the best practices that were pointed are:

The White Certificate System – Innovative financial instrument
ESCO contracts – public-private partnership
Managing EU projects and programs – innovative financial instrument
ACTA – publicly owned enterprise for waste management.
The basic problems and bottlenecks that were defined are:

- Lack of financial instruments for good maintenance of installed renewable energy systems as for example in extraordinary cases;
- Lack of knowledge;
- Lack of adequate funding for installing RES;
- Long programming procedures;
- Loans with temporal criteria;
- Bureaucracy;
- Need of simplifying the legislation;
- The difficulty of comparison and evaluation of the different operating rules of public procurement;
- Need of modernization of the public procurement rules;
- Lack of knowledge among the citizens regarding their opportunities in EE renovation of their homes for example.

The recommendations given by the respondents in **Potenza** are:

- Changes in the legislation;
- Better coordination and cooperation between state and local authorities;
- Simplification of the administrative procedures regarding the procurement processes;
- Better informed citizens;
- Finding foreign private investors;
- Introduction of pilot projects;

- VI. The survey in **Bucharest** led to 15 completed questionnaires and the best practices that were pointed are:

- Waste to Energy Plant – Timisoara – a public-private partnership instrument
- Recovery and superior utilization of landfill gas by cogeneration of heat and electricity – other financial instruments (private ones);
- Wind Power Plant Baia - other financial instruments (private ones);
- Renewable Energy Cogeneration Plant Using Biogas - other financial instruments (private ones);
- Geothermal HVAC System at ELI-NP Project – a publicly owned enterprises;
- Park Photovoltaic 0,7 MW Moara Vlasiei with Green Certificate – innovative financial instrument;

The basic problems and bottlenecks that were defined are:

- Legislation on state and local level, regarding the field of financing RES and new forms of energy;
- bureaucracy or slow and long administrative procedures with unclear and unexpected results;
- lack of interest and knowledge and experience among the local administration employees regarding the EE field as a whole and its financing;
- a lot of administrative taxes and waste of time for communication with the local authorities;

The recommendations given by the respondents in **Bucharest** are:

- Changes in the legislation;
- Better coordination and cooperation between state and local authorities;
- Simplification of the tender documents and tax payments;
- Finding foreign private investors;
- Raising awareness in city administration;
- Introduction of pilot projects;
- Clear criteria for using grants.

VII. The survey in **Sofia** led to 5 completed questionnaires and the best practices that were pointed are:

- Municipal Guarantee Fund for Small and Medium Enterprises (MGFSME) of Sofia Municipality – an innovative financial instrument;
- Specialized Municipal Privatization Fund (SMPF) – an innovative financial instrument;
- Kozloduy International Decommissioning Support Fund (KIDSF) – an innovative financial instrument;
- Municipal Bank AD – an innovative financial instrument;
- National Trust Eco fund – an innovative financial instrument;
- Energy Efficiency and Renewable Sources Fund – a public procurement financial instrument.

The basic problems and bottlenecks that were defined are:

- Legislation on state and local level, regarding the field of financing RES and new forms of energy;
- bureaucracy or slow and long administrative procedures with unclear and unexpected results;
- lack of interest and knowledge and experience among the local administration employees regarding the EE field as a whole and its financing;
- a lot of administrative taxes and waste of time for communication with the local authorities;
- lack of clear strategy on local level for introducing RES
- restrained funding from the commercial banks;
- lack of knowledge among the citizens regarding their opportunities in EE renovation of their homes for example

The recommendations given by the respondents in **Sofia** are:

- Changes in the legislation;
- Better coordination and cooperation between state and local authorities;
- Simplification of the administrative procedures regarding the procurement processes;
- Simplification of the tender documents and tax payments;
- Higher state and local authorities` subsidies in EE;
- Better informed citizens;
- Finding foreign private investors;
- Raising awareness in city administration;
- Introduction of pilot projects;
- Clear criteria for using grants.

In conclusion of the presented summary we can summarize that the problems are almost identical and that the recommendations are also very similar. It is obvious that in most countries the good examples are also very common and that means that they are well known to all partners. The new and innovative methods for some of

the partners are recognized as public private partnership or public procurements procedures for other partners but all these methods are already known and used, although they possess a lot of weaknesses and threatens for the people involved.

It is also very well presented that most respondents recognized very clearly the challenges and opportunities for each of the given good practices and pointed clear and up to date recommendations.

The aim of the survey was to identify different financial instruments for RES and new forms of energy and the goal is almost reached however these results are received without the participation of a significant part of the bank sector and the private investors so up to now we can conclude that we complete the framework but we need involvement of the mentioned stakeholders in order to receive a completed picture of the present situation and to have the chance to prepare real and clear vision for the coming 10 to 20 years.

Chapter 7. Conclusion

This compendium, prepared as a part of activity 5.1 of WP5 of the EnVision`2020 project provided the base of the whole process of identifying and analyzing the different financial instruments for the use of renewable sources and new forms of energy. It outlines the best practices, collected mainly through desk research by each partner and prepared the base for completing the activities under 5.2 of WP5 of the project.

As a result this document will play the role of a guide not only for the project partners but also for all stakeholders and other countries from SEE. The collected good practices are included and selected according to the four themes defined in the EnVision`2020 project, as follows: Innovative Financial Instruments; Public Procurement Practices; Public-Private Partnerships; Publicly Owned Enterprises.

The conclusions included in the document as well as all remarks and recommendations are based mainly on the received information from all partners in the consortium. They present in-depth analyses not only on the current situation in each country but also an attempt to accent on some future possibilities and opportunities in the financing of RES and new forms of energy.

Chapter 8. References

1. Municipal Guarantee Fund for Small and Medium Enterprises (MGFSME) of Sofia Municipality - http://ogf-sofia.com/en/about_us;
2. Municipal Bank AD - <http://www.municipalbank.bg/>
3. Specialized Municipal Privatization Fund (SMPF) - <http://www.sofia.bg/pfond2008.asp>
4. National Trust Eco fund - <http://www.ecofund-bg.org/NDEF/index.php?pageid=1&lng=bg>
5. Kozloduy International Decommissioning Support Fund (KIDSF) - <http://www.mi.government.bg/en/themes/kozloduy-international-decommissioning-support-fund-kidsf-905-348.html>
6. Energy Efficiency and Renewable Sources Fund - <http://www.bgeef.com/display.aspx?page=about>
7. Innovative financial instruments - Llewellyn, 2009
8. Financial innovations in the broad and narrow meaning - www.econstor.eu
9. Green Public Procurement - http://ec.europa.eu/environment/gpp/faq_en.htm
10. Public private partnership - <http://ppp.worldbank.org/public-private-partnership/overview/what-are-public-private-partnerships>
11. Publicly owned enterprises - <http://www.earthtrack.net/subsidies-in-depth/government-owned-enterprises>, etc.