

# REPORT

## on the status quo of EPC market in Bulgaria, focused on the city of Sofia

European Energy Service Initiative 2020 – EESI 2020  
IEE/12/686/SI2.644738

June 2013

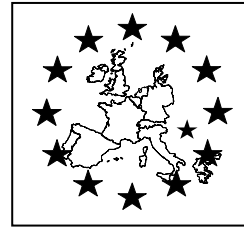
Prepared by  
The European Labour Institute and Sofia Energy Agency – Sofena / as an external expert for the  
EESI2020 project/

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



## Conditions of EPC implementation

---

### *Potential of EPC implementation in respective city/region*

---

In 2010 the number of buildings in Bulgaria is 98152 and the dwellings – 536629.

Up to the national information system for energy efficiency, the number of the state and municipal buildings is 6450..

The municipal buildings with total floor area above 1000 m<sup>2</sup> are about 540, including administrative buildings, kindergartens, schools and others.

In mind that that the most part of the existing buildings are very old i.e with low energy efficiency performance , the potential for EPC and ESCO activities in Bulgaria is high. A significant EPC market growth is expected in the public sector in short term.

Sofia Municipality covers 1349 km<sup>2</sup> and includes the city of Sofia, 3 smaller towns and 34 villages. The population of Sofia is about 1 250 000 inhabitants. Its management is a mixture of the self-government of the citizens and the operation of the state policy for the development of the capital. The capital city includes 24 administrative and territorial districts and 34 mayor-led councils.

In the territory of Sofia there are more than 3000 state owned and private buildings: administrative buildings, hospitals, schools and universities, hotels, shopping and sport centers and others.

As the Bulgarian economy is considered as very energy intensive with 2,5 times more energy consumption per GDP compared to the EU average values, the city and the region has a high potential for energy saving measures in SMEs and big industrial and service enterprises.

The EES market in the country is in its initial stage of development. It started its development around year 2000 when the first EPCs with some Bulgarian municipalities were stipulated. Before that, only a couple of demonstration projects were financed by EU.

There is a huge potential for EPC implementation in the country and the sofia region region both in building sector (public and residential buildings), services and industry. From one side there is potential for energy saving measures implementation, and from the other facility management is still a developing business sector.

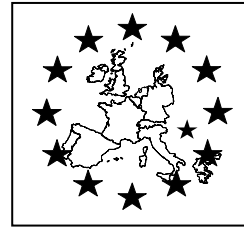
There are also ideas for EPC related to energy supply and fuel switch projects, e.g. switch to effective condensing gas boilers, biomass, cogeneration, heat pump and use of other applications.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



### Existing Energy Efficiency Documents for the city/region

The amended EE law, implementing the requirements of the EU EED, obliges the municipalities to start intensive retrofitting of their building stock. The Ministry of economics and energy issued a special Ordinance No РД-16-347 from in 2009, for the terms and the order defining the budget and the payment for EPC, leading to energy savings in buildings – owned by the state and/or municipalities.

RE Sofia Municipality:

1. Together with the Sofia Energy Agency “Sofena”, it has developed an “Action Plan for sustainable energy development for the period 2012-2020”. This Plan is based on the existing strategic programs and documents for the development of the municipality as well as on the inventory of the CO2 emissions, resulting from the energy consumption on its territory for the period 2007-2011. In it, the EPCs are considered as an highly efficient tool for achieving the planned objectives.
2. A decision of the Sofia Municipal Council No315/05.26.2011 ratified the accession of the Sofia municipality to the European initiative Convention of the mayors. The Mayor of Sofia municipality shall, within one year from the date of joining the Convention of the mayors, to develop and submit to Sofia city council Plan of Action for the sustainable energy development, including an inventory of the base level of emissions and outlining way to achieve the objectives.

The cited documents are related to the EE efficiency (such is the title) but are not focused on EPC. No documents specially addressing EPCs apart the mentioned Ordinance.

### Potential target groups and buildings for EPC implementation

#### **Public sector**

The public sector is the target group which dispose of greater financial support for EE renovation as well as with some experience in implementing the EPC defining it as a promising EPC customer.

Suitable buildings for using this business model are:

Administrative and social buildings, street lightening, hospitals, kinder gardens, schools and universities, cultural buildings, sport facilities.

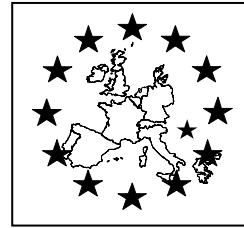
Sofia municipality owns almost 1000 buildings: administrative buildings, schools and kindergartens, healthcare centres, cultural institutions and others. To this amount, there is more than 1000 state own buildings to be added, which are part of the activities of different ministries. Public buildings could be grouped according to their use: office buildings, buildings from the educational infrastructure, healthcare centers and others.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



### Private sector

More than 97% of the Bulgarian residential buildings stock is privately owned which makes it difficult to implement large scale EPC in this sector. However the potential for energy savings is high and in case of good legal and financial conditions, projects for renovation of privately owned block of flats by EPC are feasible.

EPC can be applied also for industrial buildings (production buildings, energy buildings, ware-houses, etc.).

There is a big variety of commercial buildings as shopping centres and malls, including retail centres of big chains.

Hotels in the city operates all-year-round and consume considerable amount of energy for heating, cooling and domestic hot water, as well as for the kitchen and other facilities (as SPA, e.g.).

Seasonal hotels in Vitiosha Natural Park could be also covered by EPC schemes.

But, the **private sector lacks of information and financial resources. Possible public-private initiatives or pooling strategies could intensify the implementation of the EPC for its building stock.**

### Attitude of the local/regional authorities to EPC

The EPC scheme is not very popular on local and regional level. Some projects are already implemented for presenting on the possibilities of the EPC, but at the moment this activities can be evaluated as not enough.

EPC scheme exists as possible source for financing and implementation of energy efficiency measures in the strategic and programme documents of Sofia Municipality: Sustainable Energy Action Plan (Covenant of Mayors initiative) and Energy Efficiency Plan.

In the past there was a bad experience for ESCO scheme covering 320 municipal buildings and the current administration has very sceptic and precautionary opinion about EPC and the ensuring public benefit. The local energy agency together with companies and other stakeholders are currently trying to develop mechanisms for the protection of public benefit and fair distribution of the economical savings.

There is a need for information, awareness rising and educational activities in order to intensify the use of the EPC for reducing the energy consumption in buildings.

### Barriers in EPC implementation

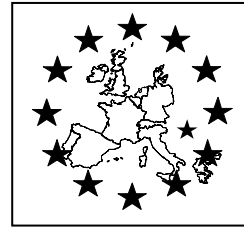
There are several common barriers for EPC valid for Bulgaria as well:

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



- **Low awareness, lack of information and skepticism** at the demand side of the market for energy services because energy savings are “not seen” and there is lack of information and understanding of the opportunities that energy efficiency offers and especially of how EPC works;
- High perceived technical and business **risks**;
- **Lack of motivation**: energy is a small fraction in total costs and hence **Low priority** of energy efficiency measures;
- **Limited understanding** of energy efficiency and EPC by financial institutions;
- **Small size of projects**: many energy efficiency projects and ventures are too small to attract the attention of large multilateral financial institutions. This creates a perceived small market size by the banking industry and lack of interest on their part to invest the time and resources to learn how to finance energy efficiency projects;
- **Legal and regulatory frameworks** not compatible with energy efficiency investments, particularly EPC;
- **Limited government support** for energy performance contracting, especially in residential sector where local banks and private investors are reluctant to participate;
- **Low and fluctuating energy prices** decrease the economic potential for energy savings;
- **The lack of reliable energy consumption data** makes it difficult to establish baselines and hence provide reliable data on actual savings.
- **The financial crisis and economic** downturn has made access to finance more difficult in the large majority of countries surveyed;
- **Absence of widely disseminated best practices** with a clear client focus;
- **Lack of standardized measurement** and verification of project savings;
- **Complex contracts**.

For Bulgaria and Sofia the following barriers can be specified:

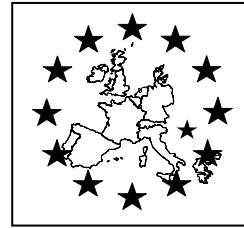
- Insufficient capacity to develop bankable projects;
- Underdeveloped ESCO market;
- Lack of equity financing;
- Lack of experience for partnership in financing;
- Lack of active dialogue between governments and ESCO companies;
- Risk to implementation of ESCO activities in result of insufficient budget;
- Increase of energy prices and operational expenses;
- Lack of awareness, advice and facilitation activities;
- Socialist heritage in energy.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



## Position of the EPC implementation

---

### *Existence of basic instruments for EPC*

---

In Bulgaria there are several documents related to the EPC like: standard contracts, tender documentation, Guidelines / mainly developed up to IEE program/, the mentioned Ordinance. Section III entitled “Contract with guaranteed result” /the BG equivalent of EPC/ in the recently amended /2013/ Energy Efficiency Act considers the definition and the procedures for the provision of energy services and EPC – art.art.48 and 49.

The Law also creates conditions of energy distributors to provide such services: “The energy traders shall provide energy services or make contributions to the Energy Efficiency and Renewable Sources Fund, or other existing or newly established energy efficiency funds for providing such services, implementing their individual indicative targets.”

There are guidelines issued by the state Energy Efficiency Agency (now Agency for Sustainable Energy Development) for applying EPC (ESCO services) in public and administrative buildings for the implementation of the Energy Efficiency Programs.

The European standard EN 15900 Energy efficiency services - Definitions and requirements has been promoted by the Bulgarian Institute for Standardization on several conferences and workshops on the topic.

There is also Ordinance No RD-16-347 from 2009 for the payment of the planned amounts for EPC in buildings state or municipal property.

### *Existence of EPC (Energy Services Companies)*

---

#### **Survey of existing ESCOs and Scope of ESCO experiences**

As per experts’ assessments, the number of companies offering EPCs is relatively high for the country size – about 100. In practice, the number of the companies realized ESCO projects is relatively low.

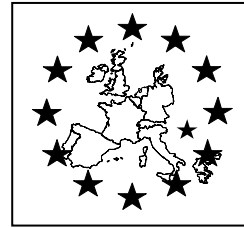
In Sofia there was 3 ESCO project implemented in the period 2002-2009 and since then there are no initiatives for EPC in public buildings. There is no information for the implementation of EPC in private buildings or industrial enterprises.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



## Ability to compete

Bulgaria has a Public procurement Act, which amended version will enter in force at the beginning of 2014. This law lays down the principles, the conditions and the procedures for assignment of public contracts in order to ensure the efficiency of spending the budget, as well as the funds, related to fulfillment of defined by the law activities of social significance. Theoretically, ESCOs are subject to tenders as well.

The competitiveness on the Bulgarian ESCO's is not very high, because they are only several acting serious on the energy efficiency market in Bulgaria.

Target groups are reluctant to use ESCOs services, they still have low credit rating. Here is the important role of the state to assure adequate guarantee mechanisms combined with strict post-control for keeping the engagements of both essential partners in the EPC process – the customer and the company providing energy services.

## ESCO associations or other institutions

There is no ESCO association in Bulgaria. A Green Energy EPC Consortium has been formed by some of Bulgaria's leading companies to combine international 'best practices' with **local experience** and **cost control** to provide the **optimal 'turn- key' solution for the design, construction and operation of renewable energy plants.**

However there are several companies that are working or have declared interest in working under EPC:

- ENEMONA;
- Green Energy EPC Consortium;
- Erato Holding Plc;
- Enersyst Bg;
- EnEffect.

Enemona is among the first Bulgarian companies to successfully execute an ESCO contract - a "Contract with a guaranteed results" / the BG equivalent of the notion EPC/ regarding energy efficiency projects in public buildings. For the past five years, Enemona signed and successfully accomplished at about 100 EPCs that exceed BGN 79.90 million /the total amount of such contracts in the country is over BGN 102.37 million; 1 EUR= 1,95583 BGN/

Main measures for energy efficiency implemented by ESCOs projects are: change of the heating installations, insulation of the buildings' envelope or change of the windows frameworks.

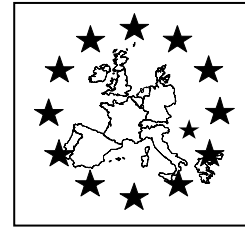
---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union





*Financing and banking sector in relation to EPC projects*

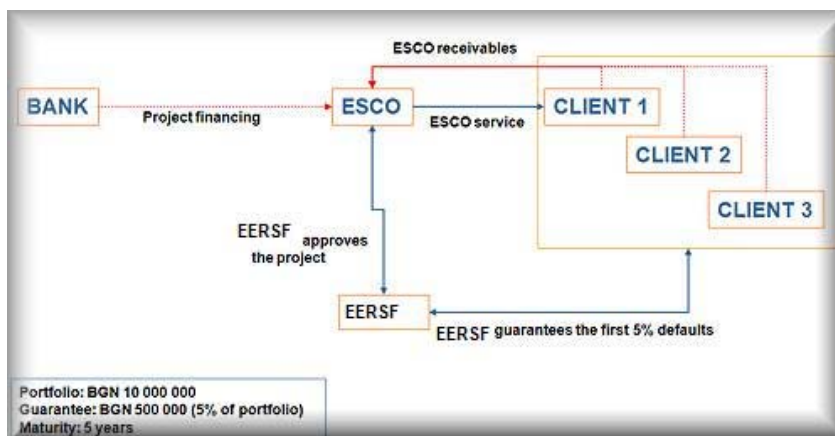
**1. The Energy Efficiency and Renewable Sources Fund (EERSF)** - a legal entity, established in accord with Chapter 4, Section I of the **Energy Efficiency Act (EEA)** from 2004. EERSF manages the financial resources received by the Republic of Bulgaria from the Global Environment Facility (GEF) through the International Bank for Reconstruction and Development (IBRD) and from other donors. EERSF is an **independent legal entity**, separate from any governmental agency or institution, and performs its activity in accordance with the EEA, the current legislation framework and the agreements with the major donors.

EERSF offers to BG companies, municipalities and private individuals the following financial products in the field of energy efficiency:

- credits and below market interest rates;
- partial credit guarantees;
- portfolio guarantees, incl. ESCO's ones..

The **ESCO portfolio guarantee** aims at attracting more ESCO companies into this business and to make ESCOs more comfortable by guaranteeing the risk of their counterparties - the project beneficiaries.

It works as follows:



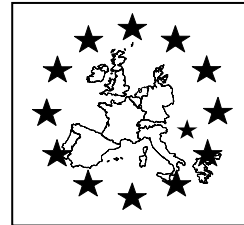
Normally **ESCOs** would bid for a project and then go to a bank to secure finance for it, or have a line of financing ready and fill it in with projects. The shortcoming of this approach is that typical ESCOs rely heavily on raising debt to fund their performance contracts. This requires that the cash flow of their business is very accurately timed and budgeted. Delayed payments from clients, or defaulting clients may severely disrupt the servicing of the debts of the ESCO itself. With our ESCO portfolio

**Disclaimer:** The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.



Co-funded by the Intelligent Energy Europe Programme of the European Union





guarantee, EERSF **undertakes some of the risk of the ESCO** and guarantee that will cover such disruptions in the flow of receivables of the ESCO.

In practice this means the following:

- EERSF signs a framework agreement with the ESCO to issue a portfolio guarantee for a preapproved portfolio of projects;
- The ESCO wins a tender for an energy efficiency project;
- EERSF approves the project and adds it to the portfolio of approved projects;
- EERSF guarantees that it will **cover up to 5%** (the percentage is negotiable) of the defaults of the delayed payments of this portfolio;
- With this guarantee, the ESCO gets better interest rates on its debt with commercial banks and has a piece of mind that there is **5% failsafe trigger** that will prevent cash flow disruptions and will reduce the risk of the clients.

Statistically, the default rate of clients of ESCOs is negligible so that 5% cover of the guarantee is more than sufficient. Delays in payments are more probable and in such cases EERSF will act as a **financial buffer** to take the shocks.

On the other hand, such product provides an **excellent leverage of EERSF's own funds**. For example a BGN 500 000 guarantee will facilitate a portfolio of investments in the amount of BGN 10 million.

Main borrowers of the EERSF are:

Municipalities – 49% of the total portfolio volume. Typical projects – EE reconstruction of public buildings\* schools, kindergartens and administrative buildings/, reconstruction and improvement of street lightening;

SMEs – 30%. Typical projects – EE reconstruction of industrial premises, replacement of old equipment with less energy consuming one;

Universities/hospitals – 21% for EE reconstruction of their premises.

**2. The European Regional Development Fund (ERDF/** - is a structural fund for investments in projects on energy efficiency in municipalities and regions, as well as in projects, using RES. The Fund was established in 1975 and is the most important instrument for the implementation of common regional policy, whose purpose is to contribute to a reduction of the differences between regions in EU.

ERDF is mainly applied in national programs for promotion of development through grants as well as in financing of: production investments, establishing or upgrading of infrastructure contributing to adaptation of the respective regions, investments for the creation of jobs etc.

EE projects, financed by the ERDF make part of the Operational Programs: "Competitiveness of the BG economics" and the "Regional development". Their financing is fulfilled on a grant basis with a contribution of 15% coming from the state budget.

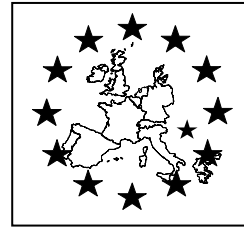
The proposal concerning Structural funds for the next phase (2014 - 2020) foresees about a doubling of funds available for energy efficiency and renewable energy to €17 billion.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



3. **European Investment Bank** - EIB provides the public and private sectors with a wide range of financial instruments for energy efficiency investments: intermediated lending, including framework loans, **available through financial intermediaries in the banking sector or through public authorities**, energy service companies or public private partnerships. It also provides indirect financing to energy efficiency projects via investment funds that have different geographical coverage and are established with the private sector and a range of international financial institutions.

4. **European Bank for Reconstruction and Development** -EBRD supports the development of market economies in the region following the widespread collapse of communist regimes. The principal forms of direct financing provided by the EBRD are loans, equity and guarantees:

- loans are tailored to meet the particular requirements of a project. The credit risk may be taken entirely by the Bank or partly syndicated to the market;
- equity investment may be undertaken in a variety of forms. When the EBRD takes an equity stake, it expects an appropriate return on its investment and will only take a minority position;
- guarantees are also provided by the Bank to help borrowers gain access to financing.

5. **The Initiative JESSICA** - Joint European Support for Sustainable Investment in City Areas. This is a program for establishment of sustainable urban development and recovery of disadvantaged urban areas. It provides European support for sustainable investment in urban areas and is a joint initiative of the European Commission, the European Investment Bank and the Council of the European Bank for Reconstruction and Development. In Bulgaria it is realized through the operational program "Regional development". The financing agreement was signed in July 2010, setting up a Fund "JESSICA". The Investments of the program amount to EUR 100 million. for municipal projects in the 7 major BG cities. The funds are managed by the EIB.

IN 2012, EIB concluded an Agreement for creating 2 Funds. The one called “ Fund for urban development of Sofia “ dispose of a capital of EUR 13 mln. These financial resources will be available for the next 3.5 years.

Sofia could apply with projects which are included in an integrated plan for urban development. The deadline for applying is June 30, 2015

Funding from Jessica in the town of Sofia may include projects with the following scope:

- recovery of disadvantaged urban areas
- basic infrastructure activities,
- energy networks and energy efficiency in the context of a more expansive plan for urban development, etc.

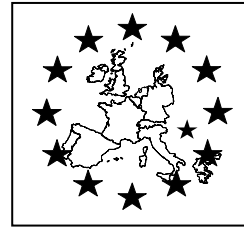
Sofia Municipal Council adopted in September 2012 a “Strategic plan for urban renewal”. By the end of 2013 Sofia municipality provides to collect package of projects for renovation and remediation of buildings, more green areas, new lightening, streets and walkways. Both the Northern and Western parks are also included in the set for attracting Euro financing. Certain 118 projects were approved, for which are needed about EUR 400 million. They are not purely municipal but rely on a public-private partnership. To have a multiplier effect in improving the environment, the approved projects will be launched together in 2014.

---

**Disclaimer:** The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



**6. Program Elena** of the EIB aiming to facilitate the release of funds for investment in sustainable energy at local level created by the EC and the European Investment Bank. It is a mechanism for technical assistance, funded by the "Intelligent Energy for Europe" (IEE II). Elena covers up to 90 % of the costs for technical assistance for the preparation of large sustainable investments for energy programs in the cities and regions. The priorities for the projects are:

- energy efficiency in public buildings;
- development of the solar energy in public buildings;
- clean and EE public transport in the cities;
- ELENA-technical assistance. The technical assistance could be provided to public authorities or other public legal persons, or unions of such structures and have to contribute to the achievements of the 20-20-20-objectives of the EU.

#### *Existence of programs for support of EPC*

---

There are no specific programmes for support of EPC in Bulgaria and Sofia. The promotion is done by ESCO companies itself. The scheme is popular and exist in the policy and programming documents at state and national level but there is no campaign or other support for the scheme.

The main support is provided by:

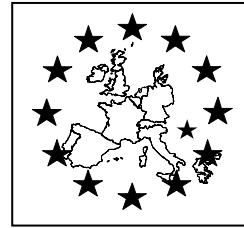
- EERSN
- The texts in the EEA and the Ordinance for EPC regarding the public building stock.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



## EPC projects

---

### *Realized projects*

---

The potential for energy savings in the private and public building sector in Bulgaria is very high /around 30%/ i.e. there are serious pre-conditions for increasing the market for energy efficiency services in the future.

ESCO experience in Sofia was from the implementation of the project "TEMOS" - "Thermal Energy Management of Municipal Buildings", financed by the Energy Saving Company. The project included measures for energy management by controlling the building level substations for heat energy supply by the district heating utility company of Sofia. Other low cost measures like replacements of heat exchangers, automation, windows tightening were also applied.

In 2001- Sofia started the implementation of its EPC project **TEMOS** which covered 309 centrally heated public buildings of different type & function: schools, kindergartens, nursery schools, hospitals, administrative buildings.

Financing: Cost of operational and investment activities was 3.85 million EURO using Two funding sources: Bank loan and Equity capital of CES.

As the project is not considered as a good practice, there are no further details available for the general public for the technical and financial feasibility of the EPC.

As mentioned above, the Company having realized at about 100 EPCs is ENEMONA. Some of the most important ones are the following:

1. ESCO contract with the Ministry of defense to over 5 mln. EUR. **Subject** of the contract with the Ministry of Defense is the application of energy efficient measures with guaranteed result, reconstruction and rehabilitation of the buildings of the military boarding-house "May" in Sofia. The period for the implementation of the contract was 195 calendar days and included the following measures - thermal insulation on the facade, improvement of the efficiency of the heating installation; Introduction of a system for automatic control of the heating etc.

2. An ESCO contract was executed with the Executiv Agency "Social activities" at the Minsitry of defence for renovating the dormitory "Chavdar 1" in Sofia. The value of the site is EUR 2 million. For the implementation of the project are provided for 180 calendar days. The EE measures embraced - renovation of all rooms, 30 parking spaces, playground with alcoves as well as new lighting system. The rooms are fully and completely furnished, tehere is a kitchen with integrated appliances, cupboards, sink and furniture. On the ground floor of the building is the laundry with dryers and archive rooms.

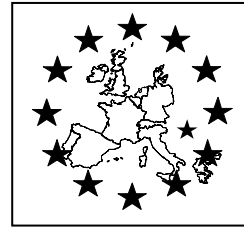
3. ESCO /EPC/ contract was signed between the company and the "Residential Fund-invest" for the implementation of EE measures in the home for poor families in the town of Dobrich. Total value of the project amounts to approximately EUR 1,5 million with forecasted payback period - 7 years. Energy saving measures implemented in the home include: replacement of the wooden window framework, application of facade insulation, application of additional insulation on the ceiling of the

---

**Disclaimer:** The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



building, increase the efficiency of the lighting system by replacement of lighting fixtures and installing sensors for tracking and controlling, improvement of the heating systems and introduction of a system for automatic control of the heating process, etc.

4. ESCO contract was signed with the municipality of Red beach for EE renovation of the building of the municipal administration. Total value of the project amounts to over EUR 400, with a payback period - 7 years. The building of the municipal administration Red beach was built in 1980, it is a public property. This is a monolithic 10-storey building, built on an area of 214.40 sq. m. The total built up area of the building is 2,704 sq. m. The EE measures are: application of facade insulation, application of additional heat insulation with mineral wool in under-roof space; increasing the effectiveness of the heating installations, introduction of a system for automatical control the heating process, replacement of the existing luminaires in the main building with new energy saving such.

All above mentioned EPCs were signed in the years 2009-2010.

### *Prospective projects*

---

As per the National information system for energy efficiency, in Bulgaria are registered 6450 buildings with a total area - 18,3 mln. sq.m. These are state and municipal property.

The public ownership of non-residential buildings is 12%, of residential ones – 3%. / BPIE Survey'2011/.

The calculations show that the specific investment needed for 1 sq. m. of the public buildings' area amounts to 0,75 BGN / EUR 0.38 / for achieving 1 kWh energy saving.

As per the Agency for sustainable energy development 630 public buildings are suitable for ESCO contracts. The necessary investments for them amount to 256 mln. BGN / 130,9 EUR/, but the results would be: energy savings up to EUR 19,1 mln. /year and 101,2 kt Co2 saved/year.

---

**Disclaimer:** *The sole responsibility for the content of this paper lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.*



Co-funded by the Intelligent Energy Europe  
Programme of the European Union