

## Interview with legal persons in the EPC-market

### Country – Bulgaria

Interview No1

#### General information

Item	
Organisation name	1. Energy efficiency and renewable energy sources Fund 2. DZZD "Energy-efficient systems"
Organisation type	<p>1. The <b>Energy Efficiency and Renewable Sources Fund (EERSF)</b> 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 <b>lending institution</b>, a <b>credit guarantee facility</b> and a <b>consulting company</b>. It provides technical assistance to Bulgarian enterprises, municipalities and private individuals in developing energy efficiency investment projects and then assists their financing, co-financing or plays the role of guarantor in front of other financing institutions.</p> <p>The underlying principle of EERSF's operations is a <b>public-private partnership</b>. 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. It has the task to <b>Promote the Development of a Working Energy Efficiency Market in Bulgaria</b>.</p> <p>2. Association of ESCO companies</p>
Date of interview	28.11.2013
Name of interviewed person	Eng. Dimitar Dukov
Function of interviewed person	Executive Director

Potential project	
Facility (project title)	A site composed of student dormitories blocks: No 9, No 26, No38 and No 40A
City, Region (site)	Sofia – the capital

Type of customer	State organization - <b>University of National and World Economy</b>
Sector	<ul style="list-style-type: none"> <li>Schools – 4 blocks of students dormitories</li> </ul>
Goals of the project <i>(e.g. comprehensive reconstruction of the energy system during six months by implementing measures saving heat, electricity and water)</i>	<ul style="list-style-type: none"> <li>Increasing EE.</li> </ul>
Number of buildings of each type <i>(e.g. 25 schools, 11 healthcare facilities, etc.)</i>	<p>Short description of the site:</p> <p><b>Block No 9:</b> The building entered in service in 1971. It is a public property. The structure of the building is composed of reinforced concrete rings, columns and plates. The building has 12 floors and partly dug basement. Exterior walls of the building are single concrete panels, with basalt coating. Basement walls, which are above the level of the ground, are in concrete, bilaterally plastered. The roof of the main building is flat, type "cold" with ventilated space of 1.50 meters height. Draining of atmospheric waters is internal, by common canal network, in the basement. Existing frames are wooden sandwiched or metal boxes with single glazing. External doors are metal. Heating in the building is centrally disposed, realized by indirect local loop station located in the basement of the building. Predominant number of inhabitants are 522 and 4 people – servicing personnel. The mode of living is 24 hours a day, seven days a week.</p> <p><b>Block No 26 :</b> The building was built in 1969 and put into exploitation in 1974. It is a public-state owned property. Built in the system large-panel construction. It consists of two bodies: Main building and low body. The main body consists of 6 wings – on six, seven and eight floors respectively and a partly dug basement. In the basement are located: the local loop station, a room with electrical boards and the storage rooms. The basement is non-heated. The floor is cement coated. On the floors are located the bedrooms of the students, each one with a bathroom; corridors, laundry room, reading room, a room for the staff and a warehouse for linen. The floor is covered with mosaic and linoleum floor in the bedrooms. To the main building is fixed the low body, which houses coffee-appetizer and a shop. Exterior walls of the building are constructed of single concrete panels and covered by cement-sand plaster. The building has a flat construction of foundations. The walls of the basement are from concrete blocks. Above the level of the ground they are covered with a mosaic. The roof of the main building is flat, type "cold" with ventilated space with a height 0.80 meters. The roof of the low body is flat, type "warm". Existing frames are wooden sandwiched. Single windows in corridors are replaced with glazed aluminum-frames. In the basement windows are wooden framed with one-layer glazing, part of them are broken. External doors are of wood or aluminum profile and glaze. The total built-up area of the building is 8465 sq. m. Predominant number of inhabitants are 607 and 4 people is the servicing personnel. The mode of living is 24 hours a day, seven days a week.</p>

	<p><b>Block №38.</b> The building was built 1969 and put into operation in 1976. It is a public-state property. The building is built in the system large-panel construction. The characteristics of this block are the same as of the block №26 , only its total built-up area is 8459 sq. m., the predominant number of inhabitants - 568 and 4 people- servicing personnel.</p> <p><b>Block № 40A.</b> The building was built in 1976. Its construction system is a large panel one. It consists of two bodies. main building and low body. The main building consists of 4 wings – respectively on five, six, seven and eight floors and a partly dug basement. On the ground floor are located local loop station, room for electrical boards and storage rooms. The basement is non-heated.. The floor is cement coated. On the floors are located the bedrooms of the students, each with a bathroom; corridors, laundry room, reading room, a room for the staff and a warehouse for linen. The floor is covered with mosaic and linoleum / in the bedrooms/. To the main building a low body is stick which houses a coffee-appetizer and a shop. Exterior walls of the building are constructed of single concrete panels and outer coated with cement-sand plaster. On the north side of fifth floor wing is located the block № 40B of the student dormitory. The building has a flat construction, the foundations are one-piece on concrete pads. The walls in the basement are of moonlit concrete. Above the level of the ground they are a tiled mosaic. The roof of the main building is flat, type "cold" with ventilated space with a height 0.80 meters. The roof of the low body is flat, type "warm". Existing windows are wooden sandwiched. Single windows of corridors are replaced with glazed aluminum frameworks. External doors are made of wood and/or aluminum profile and glaze. The total built-up area of the building is 7347 sq. m. The heating of the building is centrally disposed, there is an indirect local loop station located in the basement of the building. Predominant number of inhabitants are 531 and 4 people – servicing personnel. The mode of living is 24 hours a day, seven days a week.</p>
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### Interview

Question	Answer
What was the impulse to start thinking about realising an EPC project?	Bad status of the buildings and high energy bills
What would be the main reasons for your organisation for choosing an EPC project?	<ul style="list-style-type: none"> <li>Energy <u>cost saving</u></li> </ul>

<i>(remove not-valid answers and put remaining answers in order of decreasing importance)</i>	
What are in your opinion the main barriers the realisation of an EPC-project in your organisation? <i>(remove not-valid answers and put remaining answers in order of decreasing importance)</i>	<ul style="list-style-type: none"> <li>EPC is an <u>unknown and unproven procedure</u></li> <li>Legislation's problems</li> </ul>
What is the expected size of the first EPC project in your organisation?	Number of selected buildings in the pool: 4 buildings Energy cost of the pool: 496 183.08 euro/year Potential investment volume: 987 469,14 euro without VAT Potential savings: xxx %


#### Other information on the project

To fill in only available information\*

Timing of the project		From	Till
Project identification			
Procurement procedure			
Installation of energy efficiency measures			
Contract duration (guarantee duration)		2012	2017
Period of repayment (if the same, do not fill in)		2012	2017
Contract duration [years]		5	
Project specifications			
Measures (short description – max. 5 points)		1. Thermal insulation of external walls, the roof and the floor 2. Replacement of windows frames 3. Increase of the energy of thermal-solar collectors 4. Increase the effectiveness of the lightening 5. Increase the effectiveness of heating energy supply	
Total investment [EUR]		1 184 962.90 EUR ( 1 BGL = 0.51 EUR) ( 1 EUR = 1.95583 BGL)	
Co-financing of customer		25%	
Initial energy consumption before the project ( baseline)			
	Annual consumption of electrical energy before EE measures (base line)	<b>Bl. № 9</b> 282 582 kWh <b>Bl. № 26</b> 330 432 kWh <b>Bl. № 38</b>	<b>Bl. № 9</b> 51 713 BGL <b>Bl. № 26</b> 60 469 BGL <b>Bl. № 38</b>

1		370 866 kWh <b>Bl. № 40A</b> 265 950 kWh	67 868 BGL <b>Bl. № 40A</b> 48 669 BGL
2	Annual consumption of energy for heating before EE measures (base line)	<b>Bl. № 9</b> 1 074 526 kWh <b>Bl. № 26</b> 1 099 329 kWh <b>Bl. № 38</b> 1 088 406 kWh <b>Bl. № 40A</b> 876 429 kWh	<b>Bl. № 9</b> 108 888 BGL <b>Bl. № 26</b> 107 106 BGL <b>Bl. № 38</b> 106 970 BGL <b>Bl. № 40A</b> 88 490 BGL
3	Annual consumption of energy for domestic hot water before EE measures (base line)	<b>Bl. № 9</b> 939 813 kWh <b>Bl. № 26</b> 1 091 462 kWh <b>Bl. № 38</b> 1 021 817 kWh <b>Bl. № 40A</b> 955 770 kWh	<b>Bl. № 9</b> 78 004 BGL <b>Bl. № 26</b> 90 591 BGL <b>Bl. № 38</b> 84 811 BGL <b>Bl. № 40A</b> 79 329 BGL
	Savings (expected savings in audit)/	%	BGL/y without VAT
1st years	Electrical energy	<b>Bl. № 9 - 11,9%</b> <b>Bl. № 26 - 7,7%</b> <b>Bl. № 38 - 7,7%</b> <b>Bl. № 40A - 7,9%</b>	<b>Bl. № 9 - 1 051</b> <b>Bl. № 26 - 407</b> <b>Bl. № 38 - 406</b> <b>Bl. № 40A - 423</b>
	Energy for heating	<b>Bl. № 9 - 62,5%</b> <b>Bl. № 26 - 72,3%</b> <b>Bl. № 38 - 71,7%</b> <b>Bl. № 40A - 69,9%</b>	<b>Bl. № 9 - 91 867</b> <b>Bl. № 26 - 94 996</b> <b>Bl. № 38 - 95 167</b> <b>Bl. № 40A - 79 690</b>
	Energy for domestic hot water	<b>Bl. № 9 - 4,9%</b> <b>Bl. № 26 - 4,2%</b> <b>Bl. № 38 - 4,6%</b> <b>Bl. № 40A - 4,9%</b>	<b>Bl. № 9 - 3 856</b> <b>Bl. № 26 - 3 818</b> <b>Bl. № 38 - 3 884</b> <b>Bl. № 40A - 3 849</b>
<b>Savings</b>		<b>Guaranteed</b>	<b>Achieved</b>
Total savings	[%]		
Heat	%		69.1
Cooling	[kWh/GJ]		
Natural gas	[kWh]		
Electricity	%		8.8
Hot water	%		4.65
Water	%		
Decrease of other operational costs ( <i>wages, maintenance, etc.</i> )	[EUR]		
Total guaranteed savings	[EUR]	28%	
If there are other important aspects of the project,			



<p>innovations and client's advantages, not mentioned above, please, describe here <i>(e.g. other type of cost saved, different form of financing such as leasing, exceptionality of the project, direct link to another energy efficiency project such as building insulation)</i></p>	
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