



**Team**

Varbinka Dimitrova (host)  
Mentor: Ivo Yovchev (lecturer in electrical engineering)



**Project**

Replacing the fluorescent to LED lighting in classrooms

**Project steps**

Determining the electrical consumption of fluorescent lighting in classrooms and the electrical consumption at its replacement with LED lighting.

**Savings from the project**

- 3 236 kWh/ year saved energy
- 2,58 t CO<sub>2</sub>/ year saved emissions
- 4,5 years return period

**The company**

The main subject of activity of the Bulgarian-German Vocational Training Centre is to provide training for acquiring professional qualification for persons over 16 years of age, training for key competences and professional guidance. At this stage, DBBZ has branches in the following cities: Pazardzhik, Pleven, Stara Zagora, Tsarevo and Smolyan.

DBBZ Pazardzhik branch implements priority training activities related to promoting employment and supports the system of the traditional professional training in Bulgaria, focusing on the practical orientation of the training process and the close contact with the business. Its main objective is to create a modern type of specialists with professional qualification demanded on the labor market.

**Team**

Borislava Kyupova (project manager)  
Diyani Mitev (service engineer)  
Rositsa Ivanova (IT business analyst)  
Serafim Serafimov (service engineer)  
Mentor: Tsvetina Partsova (human resources)

**Project**

Optimization of lighting/ air conditioning at the headquarters of Seeburger Bulgaria

Optimization of office workstations (“sleep mode”)

Replacing a water heating system for the building



**Savings from the project**

- 16 043 kWh/ year saved energy
- 12,75 t CO<sub>2</sub>/ year saved emissions
- 3,5 years return period
- 4 900 BGN investment

**Steps of the project**

Detailed study and evaluation of the possible optimizations for the lighting, the air conditioning and the workstations in the company's central office building. Identification of the areas with the greatest potential for improvement. Introduction of company policy related to turning off and putting the workstations of the employees in “sleep mode”. Assessment of the current consumption of hot water in the office. Finding possible alternatives and inquiry of offers for installation of solar collector / boiler.

**The company**

Seeburger is a global leader in the business integration, which represents the merger of subsystems and the building of connectivity between them so that they look and work as a unified system.

Seeburger is an international company with many offices around the world, headquartered in Bretten, Germany. The total number of the employees is over 900, with 220 in Bulgaria.

The company's customers are over 10 000 in more than 50 countries and 15 different industry sectors.



**Team**

Vladislav Varbanov (cost expert)  
Ivo Vasilev (energy manager)

**Project**

Replacement of lighting in Kaufland Bulgaria logistics center. Switching from fluorescent lighting to LED lighting.

**Project steps**

- Study of the logistics center to discover energy potentials;
- Analysis of the consumption of existing lighting;
- Design and light-technical calculations with LED lamps;
- Project-based preparation of bill of quantities and valuation;

Analysis of the return on investment and comparison of the energy consumption with available and LED lighting;

Tender procedure, supplier selection; Commissioning.

**Savings from the project**

- 2 051 312 kWh/ year saved energy
- 1 630 t CO<sub>2</sub>/ year saved emissions
- 3,9 years return period

**The company**

Kaufland is a German food and non-food retail chain, represented in 7 countries - Germany, Poland, the Czech Republic, Slovakia, Croatia, Romania, Bulgaria. Currently in Bulgaria is the largest company in the retail sector. 58 stores represent the branch network. There is also 1 logistics center, which is the largest in Bulgaria.

Since 2012, Kaufland has stopped using fossil fuels for heating. Already 19 stores in Bulgaria and over 200 in all countries are heated and cooled by the waste energy from the refrigeration installations.

From 2014, switching entirely to energy-saving LED lighting in all new and refurbished stores.

From 2017 using only CO<sub>2</sub> with low GWP as a refrigerant agent in refrigerating installations.

Developing electro mobility by building free charging stations and using electric cars in the company.



**Team**

Borislav Iliev (technician-mechanic)  
Victor Atanasov (head of warehouse)  
Venera Ivanova (assistant, office)  
Kamen Kolev (technologist)  
Mentor: Kamen Kolev

**Project**

Saving energy resources (natural gas and electricity) through optimal use of heat

**Project steps**

- Design of the thermo-insulating coating of raw material tanks;
- Calculation of the investment and the return period;
- Making a decision to implement the project; Finding a contractor; Planning of the activities; Gradual implementation of the project.

**Savings from the project**

- 9 722,4 kWh/ year saved energy
- 22,5 t CO<sub>2</sub>/ year saved emissions
- 7 850 Nm<sup>3</sup>/ year of natural gas

**The company**

„MEXON“ OOD is a leading Bulgarian producer of detergents and personal care products since 1994. With its long experience and professionalism in the field of household chemistry, the company is a symbol and guarantee of quality and impeccable purity with an established name among the consumers who are looking for effective products.

For over 20 years, MEXON has been offering the full range of specialized and universal products to provide comprehensive care for everyday hygiene and comfort needs at home and at work.

The trademarks MEDIX, ALVINA, RAZOR, LEX and STILENA provide complete care for hygiene and comfort. The trademark MEDIX is a market leader in Bulgaria in many of the categories of cleaning products.

With uncompromising quality and strict control at all stages of the production process, MEXON guarantees consistent and high quality of its products.

**Team**

Petja Nikolova (engineer, leader of the educational team)  
Mirna Matov (organizer of museums training)  
Silviya Terziyska (organizer of museums training)  
Filip Dandolov (organizer of museums training)  
Stanislava Misheva (administrative secretary)  
Kalina Delcheva (advertising and marketing department)  
Mentor: Desislava Beleva (attorney)



**Project**

Increasing the energy efficiency at Muzeiko by reducing the electricity consumption

**Project steps**

Study of the premises for detection of energy potentials; Study of the current levels of consumption; Proposals for six concrete measures to reduce the amount of the used energy:

1. Drafting a lighting schedule in the three main areas - office, museum and cafeteria;
2. Replacement of some of the lighting and sticking of „smart“ stickers;
3. Replacement of heaters (with UV guidance);
4. Organizing an event for team building, creating useful habits through “soft power”;
5. Dissemination of the ideas among our various partners;
6. Enriching the English yard - painting the wall in white to get more natural light to the office.

**Savings from the project**

- 48 128,4 kWh/ year saved energy
- 38,26 t CO<sub>2</sub>/ year saved emissions

**The company**

Muzeiko is a children's science center, with the main purpose of popularizing science in Bulgaria and building a value system in which the protection of the environment is at the forefront. It is currently the largest children's science center on the Balkan Peninsula. It works with individual visitors, school groups, educators and representatives of business organizations. It offers different educational formats for children.

Looking for energy and resource savings  
develop specific opportunities for savings in the company  
take responsibility, develop and implement their own project

**Within the YEE Project the young specialists:**



**The first Energy Scouts in Bulgaria**





**Team**

Boris Lazarov (attorney)  
 Vyara Tomova (attorney)  
 Mentor: Alexander Stefanov (partner)

**Project**

Results from the Energy Efficiency of Law Firms

**Project steps**

- Providing ventilation / air conditioning with state-of-the-art machines;
- Replacement of the luminescent lighting with LED strips and LED lights;
- Complete energy audit of the office premises and energy efficiency analysis;
- Gradual introduction of office equipment of the highest energy class;
- Elaboration of a manual on the efficient use of the office equipment.

**Savings from the project**

- 107 280 kWh/ year saved energy
- 85,38 t CO<sub>2</sub>/ year saved emissions

**The company**

“Penkov-Markov & Partners” law company is one of the leading law firms in Bulgaria with rich history and traditions in the provision of legal services in all areas of the law related to entrepreneurship and business activity.

The law firm has a team of energy experts who not only advise our clients on various projects in the field of energy and energy efficiency but are also actively involved in the legislative process by advising and expressing opinions on behalf of the business and the non-governmental sector organizations.

The law firm is not only advising on energy and energy efficiency in accordance with the acting legislation and world best practices but is also exercising an active internal policy in these spheres and has rich own experience in them.

**Team**

Nikolai Pilev (electrician)  
 Dimitar Hadzhiev (electronics mechanic)  
 Mentor: Nikolai Pilev

**Project**

Recycling of petroleum derivatives. Pirin Tex Production EOOD energy monitoring measure only, for example, has so far led to a saving of 151 400 kWh/year.



**Project savings**

- Investment profitability 10 t/day extracted material (45% crude oil, 30% black carbon, 16% black metal, 6% noncondensable gas, 3% ash)
- 5 months return period

**The company**

The company is a subsidiary of “Rollmann & Partner Fashion Management” GmbH - a company with nearly 100 years of history in the apparel manufacturing.

Began as a small family workshop for the Rollman family in Germany, the company has gradually expanded its operations to become one of Europe’s largest clothing manufacturers today. The atmosphere of trust and co-operation between the management and the employees, as well as the excellent communication with the customers, over the decades have made the company a reliable and preferred partner for the European fashion industry.

The production capacity of the enterprise covers an area of 23 000 sq. m. and includes 10 production lines.

The production is equipped with modern machines and specialized equipment, providing high levels of flexibility and efficiency.

It is also supported by specially developed by our company IT-systems, allowing full traceability of each product.



**Team**

Dimitar Krushovski (systems for building automation engineer)  
 Iveta Debiyska (administrative specialist)  
 Mentor: Alexander Stojanov (head of “Building Technologies” department)

**Project**

Building a room control system of a conference center Siemens Bulgaria

**Project steps**

Analysis of the current state and the existing facilities; Elaboration of conceptual design (conception) for management and technical assignment; Elaboration of a detailed works project and bill of quantities; Cost analysis and return on investment; Installation and commissioning.

**Project savings**

- 63 600 kWh/ year saved energy
- 23,25 t CO<sub>2</sub>/ year saved emissions
- 3,3 years return period
- 25 000 BGN amount of the investment

**The company**

Siemens Bulgaria is a leading provider of innovative products, technologies and solutions in the field of industry, energy, transport, healthcare and infrastructure.

The company has over 500 employees in the country and is awarded with many prestigious prizes and awards for quality, human resources development and others.

Siemens has been present in Bulgaria since the end of the 19th century. The history of the company is closely related to the technical innovations in the country – from the building of the telegraph network, the electrification of a number of sites and landmark buildings, the building and development of the telephone network, the delivery of some of the first X-ray machines to today’s modern solutions such as the most environmentally friendly power plant with a combined cycle of production, the modernization of the production processes in the industry, the intelligent building technologies, the safe and efficient medical devices of the highest class.

**Team**

Vladislav Tzvetanov (facility management expert)  
 Mentor: Hristo Anastasov (process engineer, automation)



**Project**

Own nitrogen production

**Project description**

We are currently relying on supplies of nitrogen from an outside company. The monthly consumption is about 15,500 cubic meters. Our idea is to buy a nitrogen generator. In order to obtain the necessary amount of air to convert to nitrogen, we use our own compressor. Besides financial, this energy saving measure also has an environmental benefit, e.g. from the transport of nitrogen.

**Project savings**

- 24 190 kWh/ year saved energy
- 23,71 t CO<sub>2</sub>/ year saved emissions
- 2,5 years return period

**The company**

“Festo Produktion” EOOD is a subsidiary of the German concern Festo AG & Co KG, world leader in the field of automation technology, industrial training and educational programs. The plant in Sofia is a world leader in the production of magnetic sensors. The main production program also includes the production of flow and pressure sensors, proportional valves, electrical drives, communication modules, and connecting cables.

Established in 2001, the Bulgarian company is rapidly developing. At the end of 2017 the turnover exceeds 135.3 million BGN, the staff are almost 900, and the own production and logistics areas amount to 20 000 sq. m.

As main and greatest energy saving measures we have taken in recent years, we can point the replacement of 2 chillers with more efficient and the optimized production of compressed air. Savings amount to 305 000 kWh and 165 tons of CO<sub>2</sub>.

**Team**

Daniel Yonkov (constructor)  
 Zdravko Bankov (expert automation)  
 Dobri Dobrev (constructor)  
 Dimitar Boianov (energetic)  
 Mentor: Plamen Penev (Head of “Implementation and Development” department)

**Project**

Optimization of the compressor system in Herti AD

**Project steps**

Study of the compressed air supply system in the production and its description; Analytical overview of the profile and needs of the current system consumption; Graphical description of current system consumption and financial analysis based on a project; Analysis of the return on investment after introduction of the system improvements; Graphic description; Financial report.



**Savings from the project**

- 190 508 kWh/ year saved energy
- 151,05 t CO<sub>2</sub>/ year saved emissions
- 3 years return period

**The company**

„Herti“ AD is a leading European producer of aluminium composite and plastic caps for wine, alcoholic beverages, mineral waters, fruit juices, olive oil and medicines.

Starting in 1993 as a new enterprise with one machine and one size cap, today the company produces over 1 billion products per year, selling them in more than 50 countries worldwide.

In recent years, “Herti” AD has been actively present in the markets in the United Kingdom, France, Germany, the United States and Romania through the subsidiaries in these countries. „Herti“ AD is a reliable partner in developing a new product and branding in line with the company’s slogan „Your brand tomorrow is our business today“.

The management constantly invests in the creation of innovative products, production technologies, management processes and organizational systems.

**Team**

Ana-Maria Valkova (business analyst, manager)  
 Raliza Kusheva (project manager)  
 Mentor: Ana-Maria Valkova

**Project**

Digitization of office space. Replacement of physical server with cloud technology



**Project savings**

- 4 500 kWh/ year saved energy
- 3,3 t CO<sub>2</sub>/ year saved emissions
- 1 month return period
- 30% annual cost savings (compared to the previous solutions)

**Project steps**

During the Energy Scouts training program, UPHOLD’s team will develop and implement a project to digitize its office space by replacing a physical server with cloud technology, thus ensuring the security of all stored information and reducing the cost of maintenance, exploitation as well as the energy costs.

The project includes a study of the current costs of maintaining a physical server, research and selection of a suitable cloud solution, a comparative analysis of both solutions, an analysis of the return on investment and implementation of the solution.

**The company**

„UPHOLD“ OOD is a technology company, formed by a small team of specialists, united in the development of end-to-end business solutions composed of a number of socio-ecological products and services. UPHOLD applies the latest technologies and the circular economy principles to deliver valuable products and services to both business and end-users.