

Advancing resource efficient and cleaner production in Ukraine



Resource Efficient and Cleaner Production (RECP) is the integrated and continuous application of preventive environmental strategies to **processes, products, and services** to increase efficiency and reduce risks to humans and the environment. In essence, RECP is all about producing with fewer resources and minimizing environmental impacts while increasing the overall productivity.

For **Small and Medium-sized Enterprises (SMEs)**, the RECP methodology is an effective instrument in lowering production costs whilst improving their competitive advantage by applying environmentally friendly practices. The technical assistance and training provided to **Alitoni, LLC** under the EaP GREEN Programme outlined a RECP action plan for the company team. The RECP options presented below led to the effective implementation of **(1) reduction of heat loss** due to the compressors' waste heat recuperation (also greatly improving the working conditions in cold season); and **(2) reduction of electricity consumption** by investing in more effective lighting through LED technology.

ALITONI, LLC **SHOE PRODUCTION**

Company overview

Address: 62 Kostiantynivska Str., Pryluky, Chernihiv oblast
Key products: shoe blanks and insoles
No. employees: 560
Main markets: Italy
Export quota (%): 100
Founding year: 2004
Certification: ISO 19011:2018



Alitoni, LLC uses imported synthetic leather to produce shoe blanks and insoles. The company manufactures good quality leather products that are on demand in the markets of Western Europe.

Benefits

Implementation of 2 RECP options
Payback periods of maximum 2 years (option I) and 0.9 years (option II)
Reduction of 18 per cent of heat consumption/year
Reduction of 2.6 per cent of electricity consumption/year
Emission reduction of 18.4 tonnes of CO₂-eq/year

*The company's efficient operation requires regular monitoring over energy consumption; energy and resource efficiency should be in place; and the company should motivate its employees to manage energy resources rationally, said **Olena Ivasenko, Director***

Action implemented by:

The project's approach



The RECP assessment examined all production sites, and identified several opportunities from which the following two have been prioritized:

RECP option 1. Installation of a forced draft air ventilation system for recovering the compressor's discharge heat. The compressor equipment generated a 20.46 GCal of heat discharge during the heating period, which was initially wasted. To improve the situation, a heat exchanger was installed to preheat the air inlet ventilation, which has been diverged to heat the production premises (prior to this option, this was operated only with an exhaust ventilation system). Thus, the company reduced the load on the existing heating system which is equivalent to a reduction of annual natural gas consumption in the district heating system of 2,380 m³.

RECP option 2. Replacing incandescent bulbs with LEDs. 10 production lines of the enterprise have replaced 290 incandescent bulbs with energy efficient LEDs. This resulted in a reduction of power consumption by 31,610 kWh per year.

Alitoni, LLC is ready to further enhance its production potential and identify new ways to improve resource efficiency in cooperation with the RECP Centre experts. The main capacity building directions are (1) increasing material resources efficiency (waste minimization, using waste for by-products, manufacturing) and (2) increasing resource efficiency by introducing new energy saving technologies.

Saving achievements

Next steps

MAIN IMPLEMENTED ACTIONS

- Option 1:** Installation of a forced draft air ventilation system for recovery of compressor discharge heat
- Option 2:** Replacing 290 incandescent bulbs with LEDs in the production workshops



ECONOMIC KEY FIGURES

	Investment (Euro)	Saving (Euro/year)	PBP (years)
Option 1:	1,667	817	2
Option 2:	1,305	1,421	0.9
Total:	2,972	2,238	-



RESOURCE SAVINGS

	Electricity (kWh/year)	Fuel (m ³ /year)
Option 1:	-	2,380 (natural gas)
Option 2:	31,610	-



The production of leather shoes is a material intensive technology, so it generates a lot of waste. This fact pushed the company's management to define waste management as a new priority, looking for more efficient applications for reusing waste and decayed products made from leather and synthetic materials.

*Cooperation with the RECP Project team created a positive motivating attitude, a desire to deeply examine the company, and to identify ways to improve the efficiency of both materials and energy consumption; we intend to regularly raise awareness of our employees on rational resource management, said **Olena Ivasenko, Director***

The introduction of RECP has been part of the EU-funded programmes: **EaP GREEN** (2013-2017) and **EU4Environment Action** (2019-2022) executed by UNIDO. In this context, Alitoni, LLC joined the RECP training and assistance programme under EaP GREEN. Follow-up visits have been then conducted under the new Action to check the implemented RECP options after the EaP GREEN Programme ended. EU4Environment helps the six EaP partner countries preserve their natural capital and increase people's environmental well-being by supporting environment-related action, demonstrating and unlocking opportunities for greener growth, and setting mechanisms to better manage environmental risks and impacts. For more details, visit: www.eu4environment.org.



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