

Advancing resource efficient and cleaner production in Ukraine

The RECP methodology

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. RECP is all about producing with fewer resources while minimizing environmental impacts and increasing overall productivity. For **Small and Medium-Sized Enterprises (SMEs)**, the RECP methodology can effectively lower production costs whilst improving the SMEs' competitive advantage and applying environmentally friendly practices. RECP is also an effective tool to introduce and promote Circular Economy principles among SMEs.

UZHGOROD GARMENT FACTORY PJSC - CLOTHING MANUFACTURER



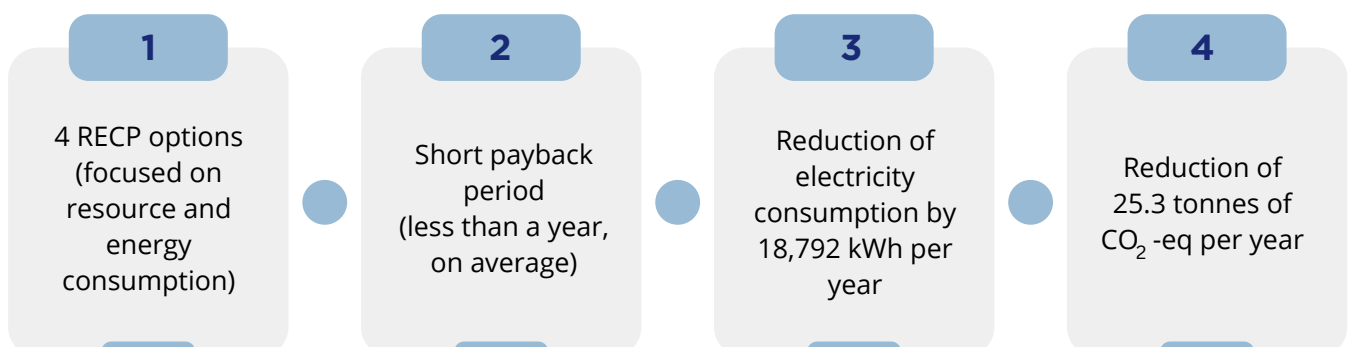
Company overview

Location: Uzhhorod
Key products: clothing
No. of employees: 253
Main markets: Ukraine, Europe
Exportation quota (%): 98.5
Founding year: 1976



Uzhhorod Garment Factory, PJSC specialises in sewing clothes for women and men (dresses, skirts, coats, trousers, blouses, jackets, and raincoats). The main market for its products are European Union countries (England, France, Germany, Italy, and the Netherlands). In the domestic market, the enterprise is known under the trademark "PARADA". Motivated to improve its performance in terms of material use and energy consumption, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise conducted in 2023.

BENEFITS



Action implemented by:

The project's approach

The RECP assessment examined the production site and prioritised four measures, out of which the following three are described below:

RECP Option 1. Adjusting the burner operation in the steam boiler: This measure consists of adjusting the burner operation, which runs on natural gas, by lowering the excess air coefficient. This would help increase the boiler's efficiency as the mass of the flue gasses would decrease alongside the heat loss.

RECP Option 3. Thermal insulation of the equipment and fittings in the condensate collector room (CCR): This measure consists of insulating the surface of the condensate collector cover with a heat-insulating material of the lowest thermal conductivity coefficient. Moreover, it also includes equipping the fittings with removable thermal covers. This would reduce current heat losses and the consumption of natural gas for the boiler. The condensate collector is used to accumulate the condensate from the steam emerging from the boiler, which is then returned back to the boiler while keeping its initial temperature.

RECP Option 4. Replacing the condensate traps: This involves the replacement of the faulty thermodynamic condensate traps used for the automatic removal of water vapour condensate within the steam pipeline network. The new float traps would help reduce steam losses within the system.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Adjusting the burner operation in the steam boiler (implemented measure)
OPTION 2	Replacing the screw compressor
OPTION 3	Thermal insulation of the equipment and fittings in the CCR (partly implemented measure)
OPTION 4	Replacing the condensate traps (implemented measure)

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	300	4,016	0.1
Option 2:	1,610	1,879	0.86
Option 3:	71	130	0.8
Option 4:	1,000	4,015	0.25

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%	NATURAL GAS (M ³ /YR)/%
Option 1:	/	4,016/6.1
Option 2:	18,792/4.8	/
Option 3:	/	129.4/0.18
Option 4:	/	3,765/5.8

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	25.3

“ Our company joined the project to receive advice from the RECP experts on the efficient use of energy within the production process. Thanks to the RECP Demonstration Project, we gained theoretical knowledge and practical skills so our employees can work on their own to analyse existing problems and develop resource efficient measures. In addition, participating in this project has convinced us that cooperation with external specialists, including RECP experts, can be fruitful and promising, said the director of Uzhhorod Garment Factory, PJSC, Ms. Myroslava Kalamunyak. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Uzhhorod Garment Factory, PJSC** joined the RECP Demonstration Project to be monitored under EU4Environment. Follow-up visits have also been conducted to check on the implementation of the recommended RECP options. EU4Environment helps the EU's Eastern Partnership 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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