

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.

"KOVALCHUK'S BAKERY" PE - FOOD PRODUCTION



Company overview

Location: Derazhnia, Khmelnytskyi

Key products: baked goods

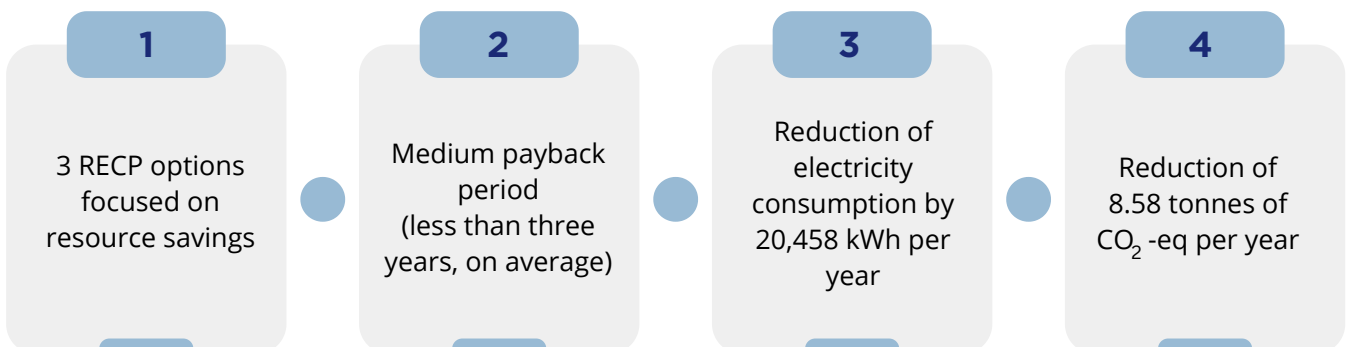
No. of employees: 27

Main markets: Ukraine

Founding year: 2003

"Kovalchuk's Bakery" PE (Private Enterprise) is a small enterprise founded in 2003, specialising in the production of bread, confectionery, and other baked goods. The bakery delivers around two tonnes of products daily. The company's main challenge lies in the use of outdated equipment for backing goods (old rotary backing ovens) and in preparing the dough. Motivated to modernise its technological processes and expand its market presence, the company participated in the RECP Clubs programme under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise conducted in 2023.

BENEFITS FROM IMPLEMENTING RECP OPTIONS



Action implemented by:

The project's approach

With the support of the RECP self-assessment tool and the contribution of the RECP experts, the company developed its RECP Action plan which identified several RECP options, out of which three were prioritised, and the first two implemented. These included low- and medium-cost measures:

RECP Option 1. Utilising the waste heat from the exhaust gas: This measure involved introducing a heat pump to utilise the heat loss from the exhaust gas for heating water.

RECP Option 2. Replacing the fluorescent lamps with light-emitting diode (LED) ones: This measure entailed replacing old and energy-inefficient fluorescent lamps with LED ones in the interior lighting system.

RECP Option 3. Installing measurement equipment on the wastewater pipeline: This measure would help save 265 EUR per year by installing a water meter to check on the generation of wastewater. Currently, only the input water is metered.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Utilising the heat of the exhaust gas
OPTION 2	Replacing the fluorescent lamps with LEDs
OPTION 3	Installing measurement equipment on the wastewater pipeline

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	3,600	1,650	2.2
Option 2:	31	35	0.9
Option 3:	1,530	265	5.8

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%
Option 1:	20,026/20.9
Option 2:	432/0.5
Option 3:	/

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	8.58

“ We were keen on discovering new technical solutions to save energy, materials, and other resources during the production process, as well as finding additional financial sources to renew obsolete production facilities. Thanks to the RECP Clubs programme, we gained insights into possible options to modernise our equipment. Furthermore, the programme has motivated us to generate fresh ideas and innovative approaches for the future implementation of RECP measures, as we plan to expand our production, said the director, Mr. Anatolii Kovalchuk. ”

The introduction of RECP Clubs programme has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **"Kovalchuk's Bakery", PE** joined the Clubs programme 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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