



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.

KYIVGUMA LLC - PRODUCTION OF RUBBER GOODS



Company overview



KIEVGUMA LLC

Location: Brovary, Kyiv oblast

No. of employees: 450

Founding year: 1930

Main markets: 28 countries worldwide

Key products: rubber, latex, silicone, polyvinyl chloride (PVC), thermoplastic elastomers (TEP), and plastic goods

Certifications: ISO 9001, EN ISO 13485, DSTU EN ISO 13485

Kyivguma, LLC has a century-long tradition for manufacturing rubber goods. The company produces more than 4,000 goods made out of rubber, latex, silicone, polyvinyl chloride, thermoplastic elastomers, and plastics, which are then separated in two big groups: moulded products (technical plates, rings, household, and agricultural products) and non-moulded products (seals, profiles, rubberised fabrics, tubes, cords). Motivated to select the production units with the greatest potential for improving performance and enhancing resource efficiency, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise was conducted in 2023.

“ Our company joined the project to improve efficiency and raise awareness of the potential benefits of the RECP methodology among our employees. Thanks to the RECP Demonstration Project, we learned how to monitor and analyse the energy, material, and water balances of our production processes. In the near future, we also plan to upgrade our equipment and technology processes, said the director of Kyivguma, LLC, Mr. Andrii Ostrohrud. ”

BENEFITS

1

9 RECP options
(focused on
resource
efficiency)

2

Short payback
period
(less than a year,
on average)

3

Reduction of gas
consumption by
54,373 m³ per
year

4

Reduction of
152.64 tonnes
of CO₂-eq per
year

Action implemented by:

The project's approach

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

RECP Option 2. Automatising the steam injection in the drying machines: This consists of installing automatic steam shut-off valves to control the injection of the water steam into the drum dryer heaters (especially when the drying process is complete). This would reduce the natural gas needed to heat up the water, and decrease heat loss.

RECP Option 4. Upgrading the unit design for the production of rubber thimbles: This consists of repairing the unit used for the production of rubber thimbles by sealing the holes and fixing any leaks within the system. It would also reduce the excess heat loss during the operation of the unit.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Installing an air recirculation system in the drum dryers
OPTION 2	Automatising the steam injection in the drying machines (implemented measure)
OPTION 3	Thermal insulation of the condensate trap lines
OPTION 4	Upgrading the unit design for the production of rubber thimbles (implemented measure)
OPTION 5	Adjusting the performance of the exhaust fan
OPTION 6	Prolongating the lifetime of the air heater (implemented measure)
OPTION 7	Heat recovery from the steam boiler blowdown
OPTION 8	Thermal insulation of the steam fittings (partly implemented measure)
OPTION 9	Using the boiler's blow down water for the supply system

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	5,464	3,770	1.4
Option 2:	8,197	21,148	0.4
Option 3:	2,213	1,803	1.2
Option 4:	1,093	5,485	0.2
Option 5:	1,093	410	2.7
Option 6:	82	410	0.2
Option 7:	8,197	7,413	1.1
Option 8:	10,929	16,393	0.7
Option 9:	546	640	0.9

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%	NATURAL GAS (M ³ /YR)/%	WATER (M ³ /YR)/%
Option 1:	/	4,848/1.11	/
Option 2:	/	27,000/5.78	/
Option 3:	/	15,482/3.56	/
Option 4:	/	7,043/1.62	/
Option 5:	5,000/0.08	/	/
Option 6:	/	/	/
Option 7:	/	9,519/2.19	/
Option 8:	/	15,482/3.56	/
Option 9:	/	/	1,728/4.9

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	152.64

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Kyivguma, LLC** 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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