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Advancing resource efficient and cleaner production in Moldova

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.

"CARTNORD" LTD - PAPER PRODUCTS COMPANY



Company overview

Location: Chişinău

Key products: paper bags, paper sacks, cardboard boxes

No. of employees: 108

Main markets: Moldova, Europe, Azerbaijan

Founding year: 2003

Certifications: ISO 9001, AEOF, FSC-CoC



"Cartnord" is a leader in the production of paper and cardboard packaging. The company operates in following four areas: wholesale and retail sales of polygraph paper and cardboard from world manufacturers (8,000 tonnes per year), production of paper sacks (45 million units per year), the production of corrugated cardboard boxes (15 million square meters per year), and production of paper bags (10 million units per year). Motivated to achieve a higher level of automation in its technological processes and reduce its dependence on electricity from the grid, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise completed in 2022-2023.

BENEFITS FROM IMPLEMENTING RECP OPTIONS

1

Implementation
of 3 RECP
options
(focused on
resource
efficiency)

2

Becoming
energy self-
sufficient

3

Medium payback
period
(four years on
average)

4

Reduction of
55.59 tonnes of
CO₂-eq per year

Action implemented by:

The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which the following three were prioritised by the company. The suggested RECP recommendations require a payback period of less than five years:

RECP Option 1. Installing photovoltaic (PV) solar panels: This measure consists of installing PV panels with a nominal power of 200 kW in order to cover the energy needs of the company, helping it become less energy-dependent, and significantly reducing electricity costs.

RECP Option 2. Installing an equipment to collect cardboard waste: This measure consists of installing a waste collecting equipment for the vacuum collection of the cardboard cut offs and punched out parts. This would significantly reduce costs associated with the manual labour currently used to collect and remove the waste.

RECP Option 3. Installing an automatic clamping machine: This measure consists of installing the above-mentioned machine to automatically glue and clamp the handles of the packages and speed up production, simultaneously saving time and resources used for manpower and manual gluing.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Installing PV solar panels
OPTION 2	Installing an equipment to collect cardboard waste
OPTION 3	Installing an automatic clamping machine

Economic key figures

RECP OPTIONS	INVESTMENT (MDL)	SAVINGS (MDL/YR)	PAYBACK PERIOD (YR)
Option 1:	4,206,400	1,192,500	4
Option 2:	100,000	450,235	2.7
Option 3:	3,428,000	1,001,568	4.8

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%
Option 1:	250,000/38.72
Option 2:	-6,240/-0.97
Option 3:	-41,600/-6.44

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	55.59

“ The company joined the project to improve its environmentally-responsible behaviour and reduce even more the generation of waste and energy consumption. Thanks to the RECP Demonstration Project, we learned that any type of consumption can be optimised and any waste can be reduced, recycled, or reused. As we plan to continue developing our policy of greening our business, the RECP Project has inspired us to come up with new ideas and approaches regarding implementation of RECP measures in the near future, said the deputy director, Mr. Vitali Erulevici. ”

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