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## -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 is an effective instrument to lower production costs and improve the SMEs' competitive advantage by applying environmentally friendly practices. RECP is also an effective tool to introduce and promote Circular Economy principles among SMEs.

### "BONS OFFICES" - LLC - POLIGRAFY -

#### Company overview

**Address:** Strada Feredeului 4/6, Chişinău  
**Key products:** printing and editing services  
**No. of employees:** 52  
**Main markets:** Moldova  
**Founding year:** 1997  
**Certifications:** ISO 9001



**"Bons Offices"** Printing House is a modern publishing and printing company, specialised in offset and flexographic printing. Founded in 1997, the company is well-known and appreciated across the country thanks to its ability to execute highly complex and sophisticated orders. It provides a wide spectrum of services: prepress, press, and post-press, as well as layout and design services. For this, it uses a modern equipment to ensure a high-quality polygraph production. Overall, the company has over 20 polygraph machines and various devices, and works with a wide range of paper and cardboard materials. Post-press works also include operations such as: relief printing (embossing), foil printing, UV varnishing, various types of bookbinding, stamping, binding, folding, and lamination. Motivated to achieve a more energy and resource-efficient production, the company joined the EaP GREEN programme (2013-2017). This publication shows the company's experience reported during the EU4Environment programme, seven years after the programme ended.

#### Benefits

- Implementation of 5 RECP options (focused on energy and resource efficiency)
- Payback period of less than two years
- Reduction of water consumption of: 6%
- Reduction of materials consumption of: 10%
- Reduction of electricity consumption of: 23%
- Energy savings that generated a reduction of 91.2 tonnes of CO<sub>2</sub>-eq/year

Action implemented by:



# The project's approach

During the RECP monitoring within EaP GREEN, the production site was examined and five RECP options were proposed:

**RECP option 1. Upgrading the system for compressed air distribution:** this measure consisted of redesigning the system to reduce the working pressure from 10 to 7 bars.

**RECP option 2. Replacing the old air compressors:** by replacing the four, old compressors with new, screw compressors, energy consumption was reduced by 8%, alongside a reduction of noise, and of CO<sub>2</sub> emissions.

**RECP option 3. Replacing the compact fluorescent lamps (CFL) with light-emitting diode (LED) tubes:** by replacing 254 40 W CFL tubes with 17 W LED tubes, the measure helped reduce electricity consumption and the heat generated by the old lamps.

**RECP option 4. Modernising the cutting and de-rolling paper machine:** the machine has been equipped with a servo-motor technology that, through a converter and software, allows the adjustment of the necessary rotation speed and high precision of the length of the sheet. The cutting accuracy of the machine has also increased, while the waste resulted from the paper was reduced.

**RECP option 5. Introducing an adhesive binding that does not require steel staples:** this measure suggested a new idea of adhesive binding by applying the puncture points of the thermo-adhesive bond. Once implemented, it eliminated the expensive technological step needed to sew booklets with steel staples, and allowed the company to save 5,200 kWh of electricity per year. Simultaneously, it reduced paper losses by 12.2 tonnes, improved the aesthetic of the final products, as well as the recyclability of the end-of-life paper products.

## Saving achievements

### MAIN IMPLEMENTED ACTIONS

- Option 1:** Upgrading the system for compressed air distribution
- Option 2:** Replacing the old air compressors
- Option 3:** Replacing the CFL lamps with LED tubes
- Option 4:** Modernising the cutting and de-rolling paper machine
- Option 5:** Introducing an adhesive binding that does not require steel staples



### ECONOMIC KEY FIGURES

	Investment (Euro)	Saving (Euro/year)	PBP (years)
Option 1:	800	440	1.8
Option 2:	10,650	2,670	4
Option 3:	2,300	3,590	0.6
Option 4:	10,000	22,750	0.4
Option 5:	5,370	10,200	0.5
<b>Total:</b>	<b>29,120</b>	<b>39,650</b>	-



### RESOURCE SAVINGS

	Water (m <sup>3</sup> /year)	Electricity (kWh/year)	Materials (tonnes/year)
Option 1:	-	6,030	-
Option 2:	-	36,728	-
Option 3:	-	49,309	-
Option 4:	-	-	41.7
Option 5:	16	5,200	13.2
<b>Total:</b>	<b>16</b>	<b>97,267</b>	<b>54.9</b>

### TOTAL POLLUTION REDUCTION

	CO <sub>2</sub> -eq (t/year)
<b>Total:</b>	<b>91.2</b>



## Company insight

The company successfully implemented all suggested RECP measures. The total investment was of 29,120 EUR and generated annual savings of 39,650 EUR. The productivity of materials (mostly paper) also increased due to the in-depth analysis of the company's norms and practices. Thanks to it, the company was able to update its rules and benchmarks based on the best practices of global leaders in the industry.

In the future, the company wants to increase its productivity by installing a reactive power compensation system, and to replace the electric boilers with a solar powered water heater.

The introduction of RECP has been part of the EU-funded programmes: **EaP GREEN** (2013-2017) and **EU4Environment Action** (2019-2024) executed by UNIDO. In this context, **Bons Offices** joined the RECP training and assistance programme under EaP GREEN, and was monitored under EU4Environment. Follow-up visits have also been conducted under EU4Environment to check on the implemented RECP options after the EaP GREEN Programme ended. EU4Environment helps the 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](http://www.eu4environment.org)

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