



-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 whilst improving the SMEs' competitive advantage and applying environmentally friendly practices. As well, RECP is considered an effective tool to introduce and promote Circular Economy principles among SMEs.

"NEOPRINT" LTD - paper recycling -

Company overview

Address: Mtskheta municipality, Mtskheta-Mtianeti region
Key products: recycling of waste paper for manufacturing corrugated cartons and paper boxes
No. employees: 50
Main markets: Georgia, Armenia, and Azerbaijan
Founding year: 2008



"Neoprint" LTD is one of the largest paper recycling companies in Georgia. The enterprise is located in Mtskheta, near Tserovani village, where it has been operating since 2008. "Neoprint" LTD recycles waste paper to manufacture corrugated cartons and paper boxes, amongst others, and sells its products nationally, as well as in Armenia and Azerbaijan. In Georgia, the enterprise enjoys a good collaboration with other enterprises, such as "Zedazeni" Brewery JSC or the mineral water company, "Borjomi". On average, the company processes about 1,284.8 tonnes of waste paper and turns it into 1,157 tonnes of new goods each year. For their production, the factory uses 13,100 m³ of water, 290,935 m³ of natural gas, and 852,060 kWh of electricity. Motivated to decrease its energy consumption, and improve its environmental and technical performance, all whilst reducing general costs and tapping into opportunities to access new markets, the company joined EaP GREEN in 2015. This publication shows the company's experience reported after the monitoring exercise conducted in 2020, five years after the programme ended.

Benefits

- Implementation of 2 RECP options (focused on resource and energy and water efficiency)
- Short payback period for the required investment
- Reduction of water consumption per tonne of product: 38%
- Reduction of electricity consumption per tonne of product: 4%
- Energy savings that generated a reduction of 3.5 tonnes of CO₂ eq/year



The project's approach

During the **RECP monitoring**, the production site was examined and several RECP options were identified, out of which the following two were prioritized and gradually implemented by the company staff. Some of them were low-cost measures, whilst others required considerable investments:

RECP option 1. Replacement of the paper slitting and rewinding machine. By changing the paper machine (which is the most important piece of equipment in the whole company), the factory successfully increased its production efficiency, and reduced energy consumption and labour force demand. What is more, this RECP measure also led to a reduction of CO₂ emissions in the atmospheric air and in an improvement in workers' health and safety.

RECP option 2. Installation of a water storage reservoir. As the factory uses a high volume of water and was looking for opportunities to reduce water consumption, four units of waste-water storage reservoirs (with a capacity of five m³, each) were installed. This gave the company the chance to reuse its wastewater. In addition, the installation of the new reservoirs helped "Neo Print" LTD save about 5,000 m³ of water annually by reducing wastewater and curbing environmental pollution.

Saving achievements

RECP MEASURES

Option 1: Replacement of the paper slitting and rewinding machine

Option 2: Installation of a water storage reservoir



ECONOMIC KEY FIGURES

	Investment (Euro)	Saving (Euro/year)	PBP (years)
Option 1:	12,000	4,050	3.0
Option 2:	1,750	90	19.4
Total:	13,750	4,140	



RESOURCE SAVINGS

	Water (m ³ /year)	Electricity (kWh/year)
Option 1:	-	34,000
Option 2:	5,000	-
Total:	5,000	34,000



TOTAL POLLUTION REDUCTION

	CO ₂ -eq (t/year)	Wastewater (m ³ /year)
Total:	3,536	5,000

Company insight

After the implementation of the recommended RECP measures, the company decided set in motion new plans to increase its production capacity. Also "Neoprint" LTD plans to increase the quality of production and staff awareness critical topics related to Circular Economy : energy resource use, and waste management.

The main reason for which the company joined the RECP Demonstration Project was to address its excessive electricity and water consumption. Before the project, the major areas that required attention were in the field of energy efficiency and the recycling of wastewater. One an lesson that the company staff acknowledged an learned was the critical role of shifting towards a clean production (which is wasteless and emission free). In the upcoming future, we also plan to improve production quality and capacity, and to increase staff safety at the workplace, said the manager of "Neoprint" LTD

The introduction of RECP has been part of the EU-funded programmes: **EaP GREEN** (2013-2017) and **EU4Environment Action** (2019-2022) executed by UNIDO. In this context, "Neoprint" LTD 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 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



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

United Nations Industrial Development Organization

Ms. Tatiana Chernyavskaya

EU4Environment Project Manager

Tel: +43 1 26 0 26 5520

E-mail: t.chernyavskaya@unido.org



Energy Efficiency Centre Georgia

0160, 19 D. Gamrekeli Str. VI floor, office 611, Tbilisi, Georgia

Tel: +99 53 2224 25 42

E-mail: eecgeo@eecgeo.org

Web: www.recg.ge